DOCUMENT RESUME

ED 178 722 CE 022 872

AUTHOR	Shively, Joe E.; Davis, Carolyn S.
TITLE	Experience-Based Career Education Part D Program, Project CIETE. High Point, North Carolina. Final Evaluation Report.
INSTITUTION	Appalachia Educational Lab., Charleston, W. Va.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C.
BUREAU NO	502AH70019
PUB DATE	Aug 79
GRANT	G047703002
NOTE	118p.; For a related document see CE 022 871
EDRS PRICE	MF01/PC05 Plus Postage.
DESCRIPTORS	*Academic Achievement; Basic Skills; *Career Education; Comparative Analysis; Educational Assessment; Employer Attitudes; *Experiential Learning; High School Students; Parent Attitudes; *Program Evaluation; Relevance (Education); Senior High Schools; Student Attitudes; Vocational Maturity
IDENTIFIERS	*Experience Based Career Education; North Carolina (High Point)

ABSTRACT

This report describes the findings of a third party evaluation of the High Point Schools, North Carolina, experience-based career education (EBCE) program. Six instruments were used to compare EBCE and non-EBCE students: (1) The Comprehensive Tests of Basic Skills, (2) the JOBS instrument, (3) the Attitude Scale of the Career Maturity Inventory, (4) the Student Attitude Survey battery, (5) the Nowicki-Strickland Scale, and (6) a student information questionnaire. In addition, a parent opinion survey and an employer questionnaire were utilized. Analysis of demographic data indicated that in the comparison group, as contrasted with the EBCE group, there were more females, more whites, better educated parents, and more fathers employed in professional/administrative occupations. Analysis of scores on standardized basic skills tests indicated that EBCE students did as well as comparison students on reading comprehension and math concepts; comparison students did significantly better than EBCE students on math applications. Analysis of scores on part 2 of the Student Attitude Survey battery indicated that students did not acquire significantly greater mastery in career knowledge nor in career planning. Parent and employer survey data indicated that both groups were positive towards the program. (Survey instruments are appended.) (LRA)

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ED178722

FINAL EVALUATION REPORT

for the

Experience-Based Career Education Part D Program

Project CLETE

High Point, North Carolina

Project No. 502-AH7-0019

Grant No. GO4-77-03002

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August, 1979

CE 022 872

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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ACKNOWLEDGMENTS

This Final Evaluation Report has been produced through the efforts of numerous individuals. High Point EBCE Program personnel contributed significantly to the successful completion of many evaluation data collection activities. They coordinated the data collection from their EBCE students and comparison students. Rose Peterson was responsible for aggregation and coding of all student evaluation data. Final typing of this report and substantial editing was completed by Carolyn Davis, who also provided substantial input to the aggregation and coding of parent, experience site personnel, and EBCE staff responses.

Published by the Appalachia Educational Laboratory, a private nonprofit educational research corporation. The work contained herein has been developed pursuant to a subcontract with the High Point Board of Education, High Point, North Carolina, through monetary support from the United States Office of Education, Department of Health, Education and Welfare. The opinions expressed in this document do not necessarily reflect the positions or policies of the U. S. Office of Education, the High Point Board of Education, or the Appalachia Educational Laboratory, and no official endorsement should be inferred.

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FINAL EVALUATION

The operation of an EBCE program requires evaluation activities to provide quantitative and qualitative evidence of an efficient and effective product. The United States Office of Education (USOE) requires evaluation as a contingency for funding; specifically, the USOE requires that evaluation activities be conducted on Part D demonstration grants by an independent third-party evaluator. High Point again selected the Appalachia Educational Laboratory (AEL) as the agency to conduct the comprehensive and objective evaluation of their program installation and operation.

Evaluation Plan

An EBCE evaluation plan was developed which delineated procedures pertinent to developing valid and reliable evidence regarding product effectiveness for purposes of decision-making. The evaluation plan presented the specific techniques and analytical procedures to be used in treating the data collected during the second year of program operation.

Design

In order that a rigorous and valid evaluation be conducted, it was necessary to establish a non-EBCE group whereby appropriate comparisons may be made. This non-EBCE comparison group was comprised of a random sample of traditional students, some of whom participated in the recruitment process but were not selected for matriculation into the program. Students from both Central and Andrews High Schools participated in the EBCE program.

Primary Hypotheses

The following major hypotheses were tested under experimental design conditions. All dealt with one year's effects of the EBCE Program:

1. Experimental students (E) will do as well in basic academic skills as comparison students (C) in a traditional high school.
2. Experimental students (E) will acquire significantly greater ($p < .05$) mastery in career knowledge than comparison students (C) in a traditional high school.
3. Experimental students (E) will acquire significantly greater ($p < .05$) career maturity than comparison students (C) in a traditional high school.
4. Experimental students (E) will develop significantly more positive ($p < .05$) attitudes toward learning environments than comparison students (C) in a traditional high school.
5. Experimental students (E) will develop significantly less ($p < .05$) sex-role stereotyping than comparison students in a traditional high school.
6. Experimental students (E) will develop significantly more ($p < .05$) internally-oriented locus of control than students in a traditional high school.

Instrumentation. The following instruments were utilized in pre/post testing each of the above stated hypotheses:

1. The Reading Comprehension and Mathematics Concepts and Applications subtests of the Comprehensive Tests of Basic Skills (CTBS) provided an assessment of the extent to which the students developed basic academic skills. (Appendix A)

2. The second subtest of the Student Attitude Survey (SAS) deals with career knowledge and planning and was used to test the related hypothesis. (Appendix B)
3. The Career Maturity Inventory (CMI) was used to measure students' career maturity and involvement in the career choice process. (Appendix C)
4. The Assessment of Student Attitudes (ASA) is the first subtest of the Student Attitude Survey (SAS) and was used to provide an assessment of student attitudes toward various aspects of schooling and the total learning environment.
5. The JOBS instrument was utilized to measure the degree to which sex-role stereotyping occurred. (Appendix D)
6. The Nowicki-Strickland (ANS-IE) was used to measure the change of internal versus external locus of control. (Appendix E)

The Student Information Questionnaire (SIQ) was utilized to obtain basic demographic data about the students and was administered only on a pretest basis. (Appendix F)

Testing Schedule. Based on the experimental design being utilized in this study, both EBCE and comparison students were pretested at the beginning of the school year. Students exiting the program at the end of the year were posttested. Since High Point operates on semesters (18 weeks each), some students pretested in the fall opted out of the program throughout the school year. These students were not posttested.

Data Analyses. Based on the experimental design being utilized, appropriate statistical analyses were selected and conducted to test the main

effects associated with each hypothesis. These analyses included both descriptive and inferential statistics.

Secondary Hypotheses

Parents and employers were also administered appropriate assessment instruments to determine their attitudes toward the EBCE program. The following hypotheses associated with these topic areas were investigated:

7. Parents of EBCE students will have positive attitudes toward the EBCE Program.
8. Community resource persons will have positive attitudes toward the EBCE Program.

Instrumentation. The following instruments were used to investigate each of the above hypotheses.

7. The Parent Opinion Survey was utilized to assess parents' attitudes toward the EBCE Program. (Appendix G)
8. The Employer Questionnaire was utilized to assess experience site personnel's attitudes toward the EBCE program as it was implemented at their site. (Appendix H)

Testing Schedule. Employers and parents received their questionnaires only at the end of the testing period (since these assessments were directed at operation characteristics, pretesting would be based on an empty set of experiences). These questionnaires/surveys were mailed to the parents and employers with instructions for completing the forms and returning them in stamped self-addressed envelopes.

Data Analyses. Statistical analyses were also selected and conducted to test these secondary hypotheses. These analyses included descriptive statistics.

Additional Procedures

Information not related to respondent group outcomes was also collected and analyzed. Input on process objectives and other aspects of program implementation and operation was obtained from/provided to EBCE staff on an informal basis throughout the year. End of the year EBCE staff perceptions were also obtained using the EBCE Staff Questionnaire. (Appendix I)

RESULTS

As implementation occurred at the site, High Point became involved in a system of mutual adaptations--a process of modification of the RBS/EBCE model and of the implementation site such that a successful implementation could occur. Both state and local needs and constraints were taken into consideration as the program was operated and revised. These adaptations (though usually minor in nature) hopefully impacted students, parents, experience site personnel, and the EBCE staff. Thus, impact data will be presented in the following order: student demographic data; student outcome data; parent, experience site personnel, and EBCE staff perceptions/opinions; and evaluator comments/insights about the implementation/operation process.

Demographic Data

Data sets were available on 39 EBCE and 37 comparison students. Table 1 presents the demographic data obtained on the SIQ from both the EBCE group and the comparison group of students.

Table 1

From Table 1 it can be seen that there were more females than males enrolled in EBCE (77%) and more (51%) of the comparison group were females. Nearly 36% of the EBCE students were white, and over 61% of the students were black. For the comparison students, about 65% were white and 35% were black. While High Point utilized a few sophomores in their programs, 23% of the EBCE students were seniors and 72% were juniors. For the comparison group 8% were seniors and 86% were juniors.

Table 1

Demographic Frequency (SIQ) of EBCE and Comparison Students

Variable	E n = 39	C 37
Sex		
Male	9	18
Female	30	19
Ethnic Group		
White	14	24
Black	24	13
Other	1	0
Grade		
12th	9	3
11th	28	32
10th	2	2
Father's Education		
Less than High School	17	9
High School	8	9
More than High School	7	15
Missing	7	4
Mother's Education		
Less than High School	14	8
High School	13	12
More than High School	9	14
Missing	3	3
Number of Sibling Dropouts		
None	28	26
One	7	3
Two or more	1	5
Missing	3	3

Variable	E n = 39	C 37
Long-range Goals		
Clerical	3	6
Craftsman	1	2
Farmer	0	0
Homemaker	0	1
Laborer	0	0
Manager	1	1
Military	6	3
Operative	0	1
Professional	15	15
Proprietor	1	0
Protective Service	0	0
Sales	4	1
Service	1	0
Technical	1	1
Other	2	2
Don't Know/Missing	4	4
Expectation one year later		
Working full-time	3	6
Entering OJT	3	0
Military	5	3
Homemaker	0	0
Vocational School	4	2
Academics - Jun./Comm. Coll.	4	1
Tech/Voc. - Jun./Comm. Coll.	2	2
4-Year College/University	14	18
Working part-time	1	0
Other/Missing	3	5

Table 1 (Cont'd)

Demographic Frequency (SIQ) of EBCE and Comparison Students

Variable	E	C	Variable	E	C
n =	39	37	n =	39	37
Major field of study			Mother's Occupation		
General	9	5	Clerical	3	8
Voc. Ed.	5	6	Craftsman	0	2
College Prep.	14	21	Farmer	0	0
Other	6	0	Homemaker	12	12
Missing	5	5	Laborer	3	0
			Manager	2	3
Father's Occupation			Military	0	0
Clerical	2	1	Operative	10	4
Craftsman	5	6	Professional	2	2
Farmer	1	0	Proprietor	1	0
Homemaker	0	0	Protective Service	0	0
Laborer	4	2	Sales	2	0
Manager	5	7	Service	0	3
Military	2	0	Technical	1	0
Operative	5	3	Missing	3	3
Professional	0	4			
Proprietor	1	2			
Protective Service	0	0			
Sales	3	4			
Service	0	1			
Technical	1	1			
Missing	10	6			

Nearly 44% of the EBCE students' fathers had less than a high school education, only 21% had a high school education, and nearly 18% had some post-secondary education. No data were available on 18% of the fathers. For comparison students, 24% of the fathers had less than a high school education, 24% had a high school education, and 41% had some post-secondary education. No data were available on 11% of the fathers. For the mothers of EBCE students, nearly 36% had less than a high school education, 33% had a high school education, and 23% had some post-secondary education (7% missing data). For the mothers of comparison students, over 21% had less than a high school education, over 32% had a high school education, and nearly 38% had some post-secondary education (8% missing data). Thus the parental educational levels of EBCE students and comparison students were dissimilar; parents of comparison students were better educated.

In terms of the number of siblings who dropped out of school, 72% of the EBCE students indicated that they had had no siblings who dropped out. For the comparison students 70% also indicated no siblings who had dropped out of school.

In response to the SIQ question on the long-range goals, 44% of the EBCE students indicated PROFESSIONAL, MANAGERIAL, or PROPRIETARY goals, nearly 13% indicated SALES and SERVICE, and over 15% indicated MILITARY long-range goals. Of the comparison students 43% indicated PROFESSIONAL, MANAGERIAL, or PROPRIETARY goals, 16% indicated CLERICAL goals, and 11% indicated that they didn't know their long-range goals. Only one of the EBCE or comparison students indicated a long-range goal of being a HOMEMAKER.

Nearly 36% of the EBCE students expected to be attending a four-year college or university one year after completing high school, over 15% expected to be on OJT or working full-time, and nearly 26% expected to be attending or taking courses at a vocational, technical, trade, or business school or at a junior college. Nearly 49% of the comparison students expected to be attending a four-year college or university one year after completing high school, only 14% expected to be involved with vocational education, and over 16% expected to be on OJT or working full-time. Although nearly two-thirds of the respondents were female, not one of the EBCE or comparison students indicated that they expected to be a homemaker or housewife one year after completing high school. Higher percentages by the comparison group for post-secondary education may well be a function of the higher parental education level in the group as compared to the EBCE group.

Of the EBCE students 23% were enrolled in a general curriculum field of study, nearly 37% were enrolled in a college preparatory curriculum, and nearly 13% were enrolled in a vocational education curriculum. Of the comparison students nearly 14% were enrolled in a general curriculum, 57% were enrolled in a college preparatory curriculum, and 16% were in a vocational curriculum.

Over 15% of the EBCE students' fathers were employed in professional, administrative, or proprietary positions; nearly 36% were employed as laborers, craftsmen, or operatives; and nearly 26% of the data on fathers' occupations was missing. Over 35% of the comparison students' fathers were employed in professional, administrative, or proprietary positions; over 29% were employed as laborers, craftsmen, or operatives; over 13% were

engaged in sales and service; and 16% of the data was missing. Thus fathers of comparison students were in white-collar positions whereas fathers of EBCE students were in blue-collar positions.

Nearly 31% of the mothers of EBCE students were homemakers or housewives; nearly 13% were employed in professional, administrative or proprietary positions; and over 33% were employed as laborers or operatives. Over 32% of the mothers of comparison students were homemakers or housewives; over 13% were employed in professional, managerial, or proprietary positions; over 10% were employed as operatives; and over 21% were in clerical work. Thus mothers of EBCE students were more labor-oriented whereas mothers of comparison students were more clerical-oriented.

In summary, demographic data indicate that EBCE and comparison students were dissimilar as a group in terms of sex, race, parental occupations, field of study, and parental education. Long and short-range goals, number of siblings who dropped out of school, and grade level showed the greatest similarities.

Outcome Data

The impact and effect of the EBCE program on various respondent groups was determined by testing a number of hypotheses. The format of this section is to state each hypothesis, give the source of the data collected to test the hypothesis and the procedure used for hypothesis testing, a description of the findings, and a summary. While pertinent data is presented within each section, complete analysis of variance (ANOVA) and analysis of covariance (ANCOVA) tables are presented in Appendix J.

Hypothesis 1

The first hypothesis associated with student outcome data related to basic skills performance: EBCE students (E) will do as well in basic academic skills as comparison students (C) in a traditional high school. Data used to evaluate the first hypothesis were students' scores on the Reading Comprehension (RC), Mathematics Concepts (MC), and Mathematics Applications (MA) subtests of the CTBS battery. Analysis of variance (ANOVA) and covariance (ANCOVA) procedures were utilized to test the hypothesis about basic academic skills.

Table 2 presents the CTBS outcome statistics.

Table 2

Data presented in Table 2 indicate that there were significant differences between the two groups on two of the three subtests (MC and MA) at the pretest period and at the posttest period. Posttest MA scores were still significantly different ($p < .05$) even after covariance procedures were utilized. Based on the data presented in Table 2 and subsequent statistical analyses, the first hypothesis was partially rejected. The EBCE students did do as well in basic reading comprehension and math concepts skills as comparison students enrolled in a traditional high school; comparison students had significantly more positive MA scores than did the EBCE students.

Figure 1 graphically displays the test results.

Figure 1

Table 2

CTBS Data

	E-pre	C-pre	E-post	C-post	Adj. E-post	Adj. C-post
Reading Comprehension (45 items)						
n	38	37	38	37		
$\bar{X}$	22.4	26.6	23.9	26.3		
s	9.4	9.6	10.1	11.5		
range	5-39	7-45	9-42	0-44		
F	3.82		0.92			
p	nsd		nsd			
Mathematics Concepts (25 items)						
n	38	37	38	37		
$\bar{X}$	13.6	16.5	14.3	17.5	15.3	16.5
s	5.7	5.8	5.3	5.5		
range	5-23	5-24	6-22	5-25		
F	4.89*		6.43**		1.60	
p	.05		.025		nsd	
Mathematics Applications (25 items)						
n	38	37	38	37		
$\bar{X}$	9.8	13.0	11.0	15.5	12.1	14.4
s	5.9	6.3	5.5	6.9		
range	0-20	2-24	1-24	0-25		
F	5.25*		9.77**		3.98**	
p	.05		.005		.05	

*$F_{.05}(1,73) = 3.98$

**$F_{.025}(1,73) = 5.26$

**$F_{.005}(1,73) = 8.43$

**$F_{.05}(1,72) = 3.98$

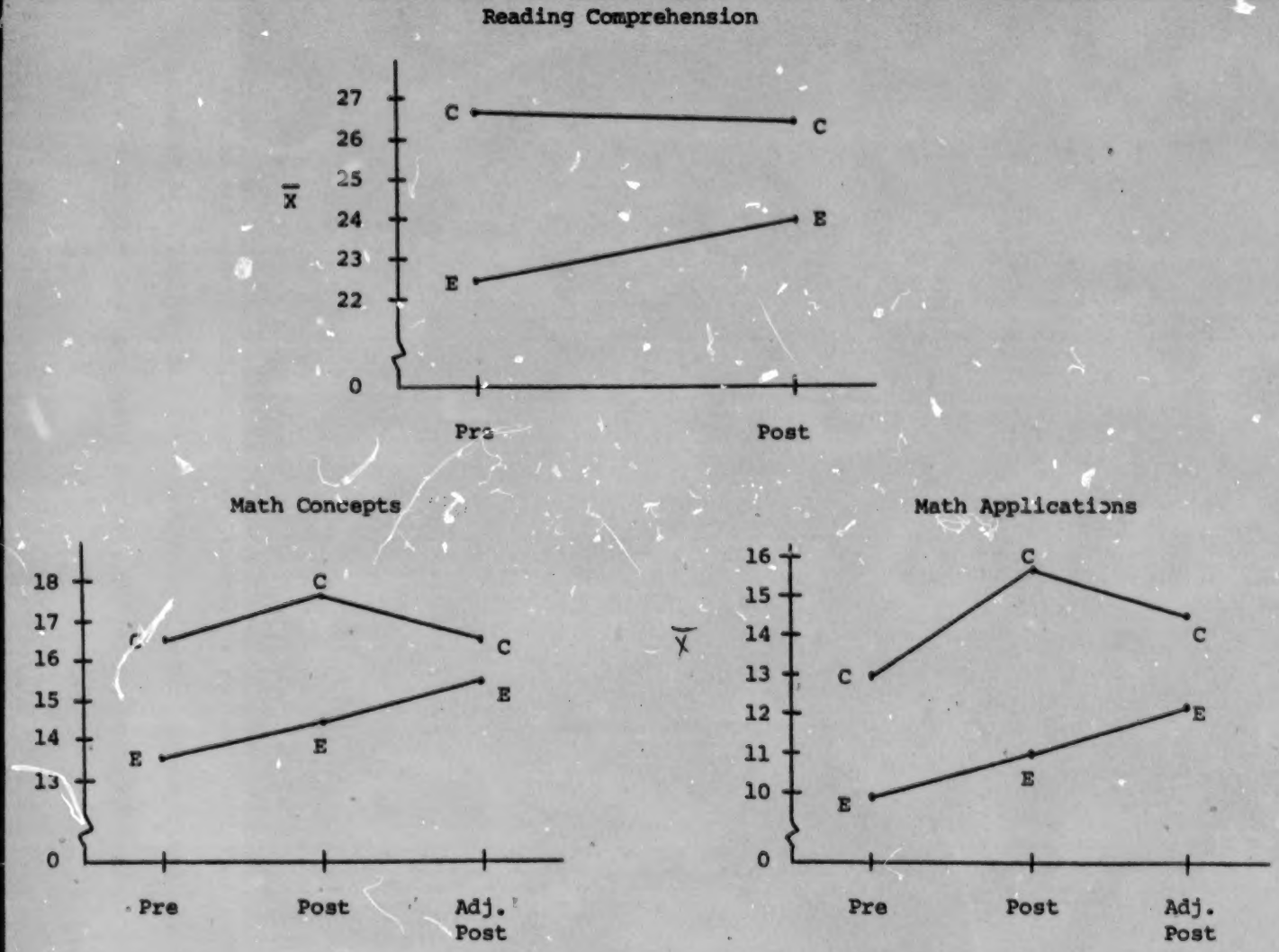


Figure 1

CTBS Data

From Figure 1 it can be visually seen that EBCE students showed positive growth in reading comprehension, math concepts, and math applications; however, comparison students also showed positive growth patterns in MC and MA.

Hypothesis 2

The second student outcome hypothesis related to acquisition of career knowledge: EBCE students will acquire significantly greater mastery in career knowledge than comparison students in a traditional high school. Data used to test this hypothesis were students' scores on the second subtest of the SAS. This second subtest not only provided a composite score (attitude toward Work) but also two partial scores: career knowledge and career planning. Analysis of variance (ANOVA) procedures were utilized to test the second hypothesis.

Table 3 presents the statistics on the SAS - Part 2 outcomes.

Table 3

Statistics presented in Table 3 indicate that the EBCE and comparison students had equivalent scores on both subsections and the composite at the pretest period and again at the posttest period. Both groups of students showed slight increases in their test scores. Thus, based on the data presented in Table 3 and on subsequent statistical analyses, the second hypothesis was rejected. The EBCE students did not acquire significantly greater mastery in career knowledge, career planning, and work than did comparison students.

Table 3

SAS Part 2 Data

	E - pre	C - pre	E - post	C - post
Career Knowledge (12-60 points)				
n	38	37	38	37
$\bar{X}$	43.2	42.6	47.7	45.1
s	8.1	5.8	5.6	5.8
range	24-58	31-56	38-60	34-60
F	0.14		3.80	
p	nsd		nsd	
Career Planning (10-50 points)				
n	38	37	38	37
$\bar{X}$	39.2	37.0	39.4	37.8
s	6.2	5.3	5.2	4.6
range	27-50	29-50	31-50	30-48
F	2.83		1.84	
p	nsd		nsd	
Work (22-110 points)				
n	38	37	38	37
$\bar{X}$	82.4	79.6	87.0	82.9
s	13.2	9.7	9.8	9.4
range	61-108	62-101	72-110	66-108
F	1.13		3.43	
p	nsd		nsd	

Figure 2 graphically displays the test results from the SAS - Part 2.

Figure 2

From Figure 2 it can visually be seen that both the EBCE students and comparison students showed slight growth in career knowledge, career planning and composite attitude towards work.

Hypothesis 3

The third hypothesis associated with student outcome data related to career maturity: EBCE students will acquire significantly greater career maturity than comparison students in a traditional high school. Data used to test this hypothesis were students' scores on the CMI. An analysis of variance (ANOVA) procedure was utilized to test the third hypothesis.

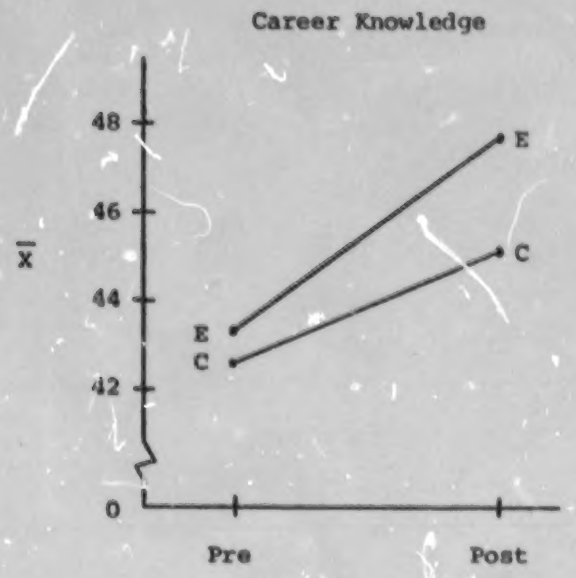
Table 4 presents the statistics on the CMI outcomes.

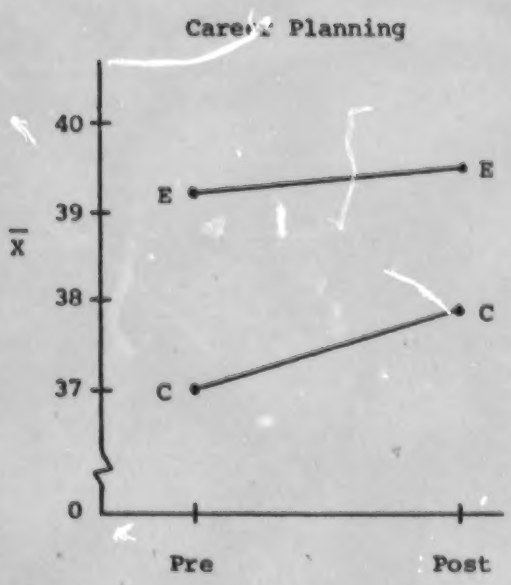
Table 4

Statistics presented in Table 4 indicate that the EBCE and comparison students had equivalent scores on the pretest. Similarly, EBCE students and comparison students had similar scores on the posttest. Thus, based on this data and the statistical analyses, the third hypothesis was rejected. The EBCE students did not acquire significantly greater career maturity than comparison students.

Figure 3 graphically displays the test results from the CMI.

Figure 3





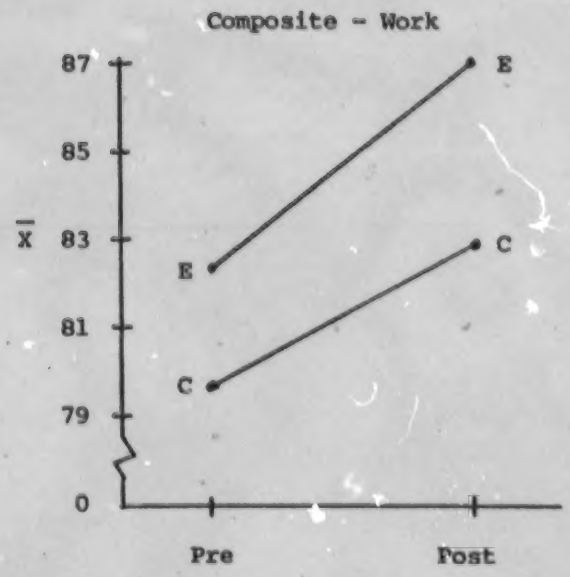


Figure 2

SAS Part 2 Data

Table 4

CMI Data

(0 - 50 points)

	E - pre	C - pre	E - post	C - post
n	39	35	39	35
$\bar{X}$	30.4	30.8	32.8	34.2
s	6.1	6.8	5.7	6.1
range	11-42	11-41	19-45	17-45
F	0.08		1.05	
p	nsd		nsd	

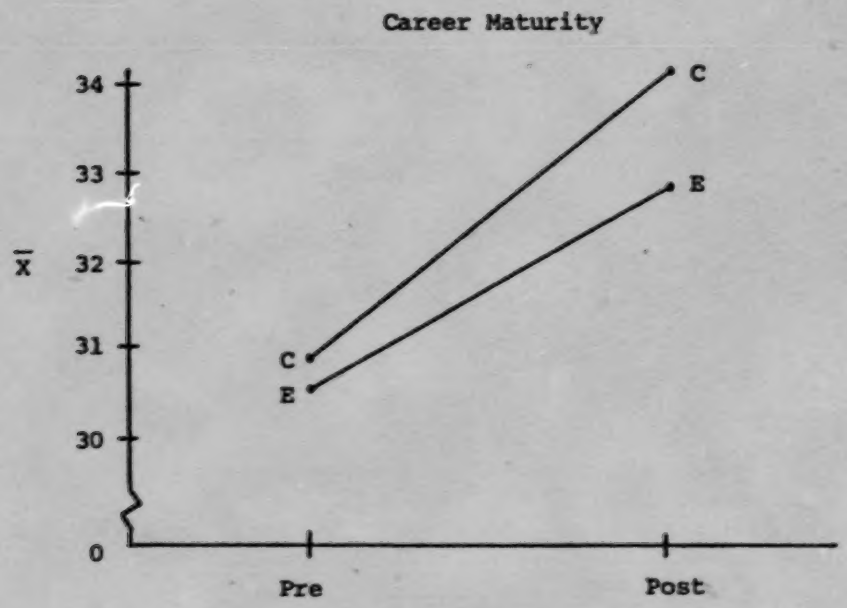


Figure 3

CMI Data

From Figure 3 it can visually be seen that both EBCE and comparison students showed a large growth in career maturity.

Hypothesis 4

The fourth student outcome hypothesis related to attitudes toward learning environments: EBCE students will develop significantly more positive attitudes toward learning environments than comparison students in a traditional high school. Data used to test this hypothesis were students' scores on Part 1 of the SAS. Part 1 of the SAS yields 5 different scores: attitude toward education in general, school curriculum, school resources, school counseling, and overall learning environment (composite). Analysis of variance (ANOVA) was used to test the fourth hypothesis.

Table 5 presents the statistics on the five outcomes of Part 1 of the SAS.

Table 5

Data and statistics presented in Table 5 indicated that the EBCE students and the comparison students had equivalent pretest scores on all 5 dimensions. Similarly, the posttest scores on all 5 dimensions for both groups were also equivalent. On all five sets of pretest data the comparison students obtained higher scores than did the EBCE students. However, on all five sets of posttest data the EBCE students had higher scores than did the comparison students.

Figure 4 graphically displays the test results for the 5 subscales of Part 1 of the SAS.

Figure 4

Table 5

SAS - Part 1 Data

	E - pre	C - pre	E - post	C - post
Part a - Education in General (7-35 points)				
n	38	37	38	37
$\bar{X}$	24.8	25.7	24.7	23.7
s	5.3	4.1	4.6	4.6
range	14-35	18-37	12-33	11-30
F	0.69		0.86	
p	nsd		nsd	
Part b - School Curriculum (5-25 points)				
n	38	37	38	37
$\bar{X}$	18.9	19.6	18.9	18.4
s	3.5	2.3	2.4	3.2
range	9-25	16-25	12-23	11-24
F	1.03		0.52	
p	nsd		nsd	
Part c - School Resources (9-45 points)				
n	38	37	38	37
$\bar{X}$	30.9	32.3	30.2	29.1
s	5.7	4.3	5.4	5.4
range	18-45	25-43	18-39	15-41
F	1.33		0.73	
p	nsd		nsd	

Table 5 (cont'd)

SAS - Part 1 Data

	E - pre	C - pre	E - post	C - post
Part d - School Counseling (5-25 points)				
n	38	37	38	37
$\bar{X}$	15.7	15.8	16.1	15.2
s	3.7	4.1	4.3	3.8
range	7-23	6-22	6-22	6-23
F	0.01		0.95	
p	nsd		nsd	
Composite - Total Learning Environment (26-130 points)				
n	38	37	38	37
$\bar{X}$	90.3	93.3	89.8	86.4
s	14.6	11.7	14.1	14.2
range	55-126	65-120	52-114	44-115
F	0.96		1.10	
p	nsd		nsd	

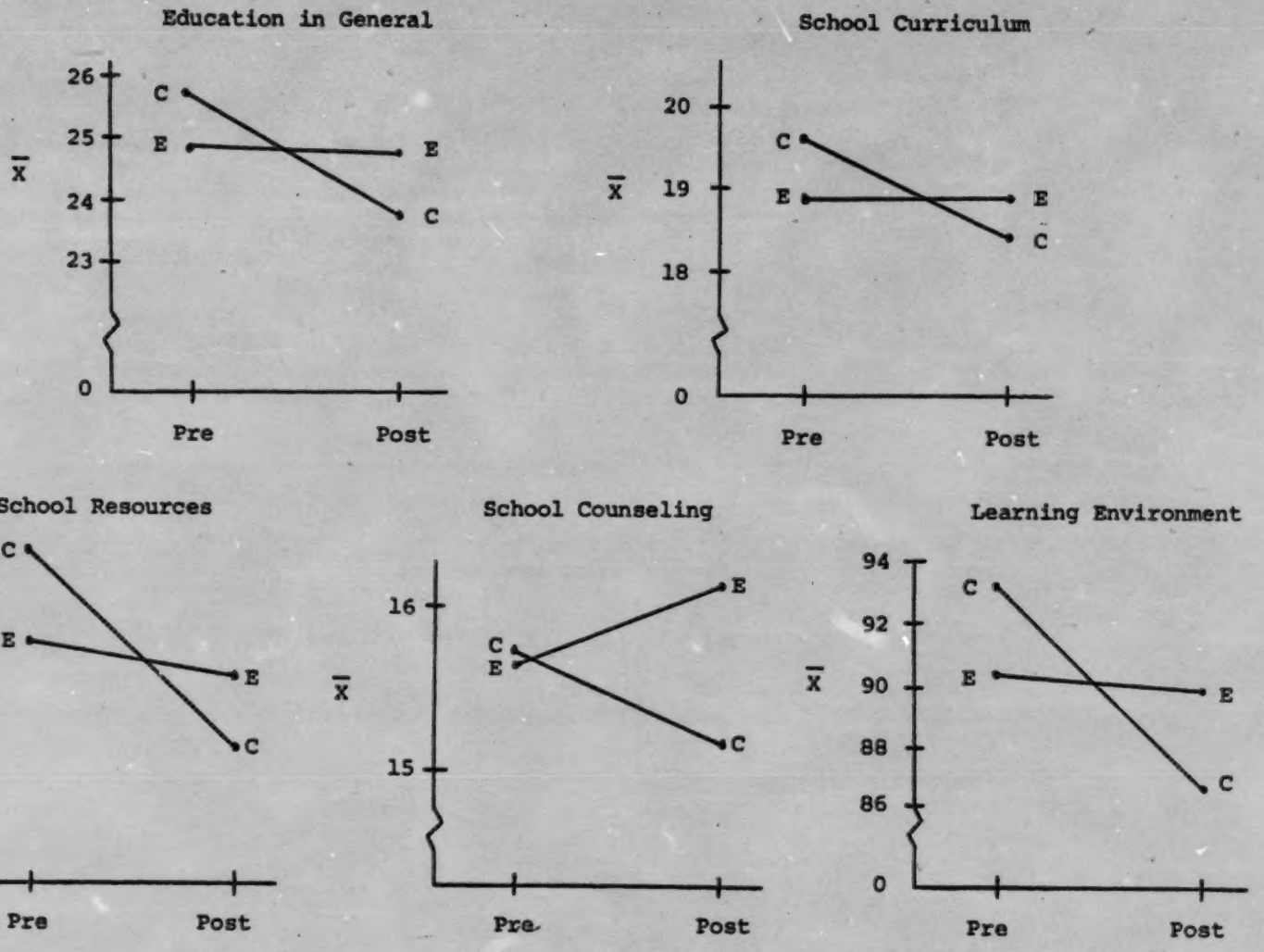


Figure 4

SAS Part 1 Data

From Figure 4 it can visually be seen that EBCE students made positive gains on only one subpart, whereas comparison students' scores decreased on all five different subparts. The data do not depict a situation of significances; in fact, a trend in attitudes is not apparnet for EBCE students--though comparisons always declined. Thus based on the data presented in Table 5 and visually displayed in Figure 4, the fourth hypothesis was rejected. EBCE students did not develop significantly more positive attitudes toward learning environments than did the comparison students.

Hypothesis 5

The fifth hypothesis associated with student outcome data related to sex-role stereotyping: EBCE students (E) will develop significantly less sex-role stereotyping than comparison students (C) in a traditional high school. Data used to evaluate the fifth hypothesis were students' scores on the JOBS instrument. Analysis of variance (ANOVA) procedures were utilized to test the fifth hypothesis.

Table 6 presents the data and statistics on the JOBS outcomes.

Table 6

The information presented in Table 6 indicates that the two groups were initially equivalent. When posttest scores were analyzed (using ANOVA) there was still no difference.

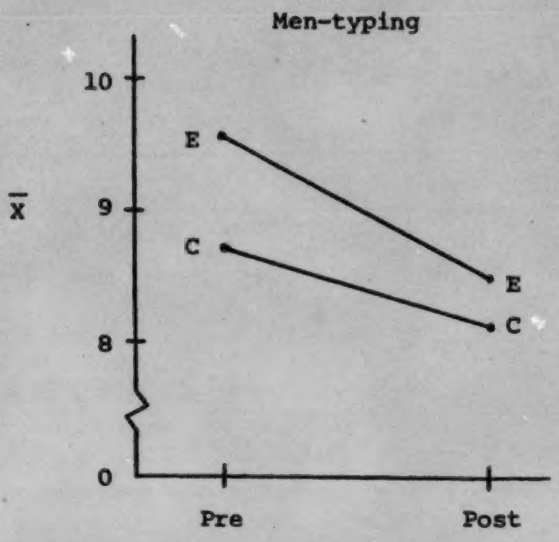
Figure 5 graphically displays the results from the JOBS instrument.

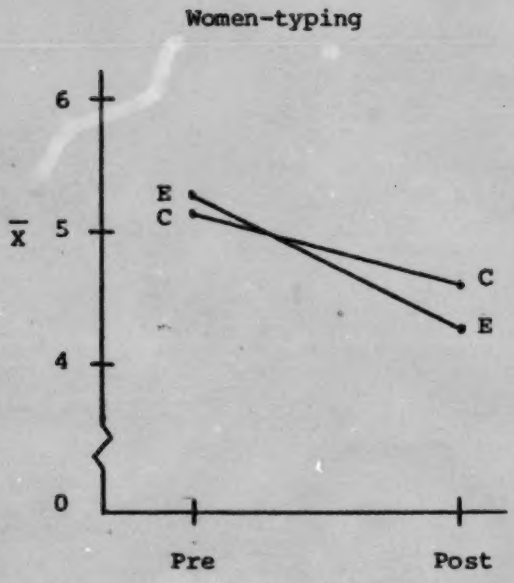
Figure 5

Table 6

JOBS Data

	E - pre	C - pre	E - post	C - post
Men (0-30 points)				
n	39	37	39	37
$\bar{X}$	9.6	8.8	8.4	8.1
s	4.5	4.1	5.4	4.6
range	0-18	0-16	0-18	0-21
F		0.66		0.06
p		nsd		nsd
Women (0-30 points)				
n	39	37	39	37
$\bar{X}$	5.2	5.1	4.3	4.7
s	2.4	2.4	2.8	3.0
range	0-10	0-10	0-9	0-12
F		0.05		0.26
p		nsd		nsd
Both (0-30 points)				
n	39	37	39	37
$\bar{X}$	15.2	16.1	17.3	17.2
s	6.4	5.8	7.7	7.0
range	2-30	6-30	4-30	1-30
F		0.44		0.00
p		nsd		nsd





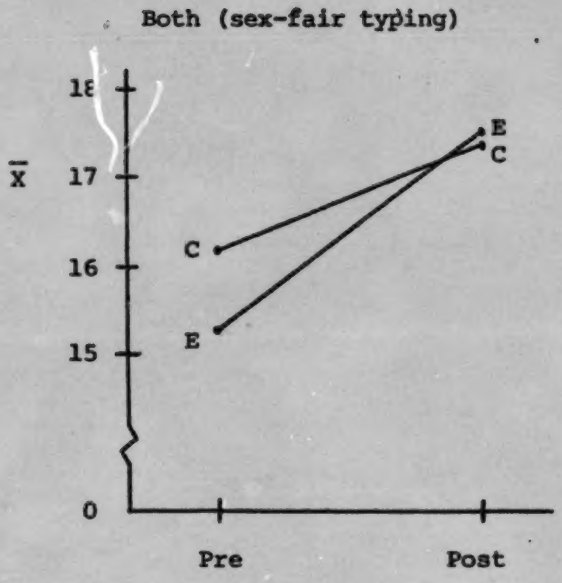


Figure 5

JOBS Data

From Figure 5 it can be seen that for the partial score related to stereotyping males, EBCE students exhibited slightly less and the comparison students also slightly less over the time period. Similarly, it can also be seen that EBCE students exhibited slightly less female stereotyping over the time period; and comparison students also exhibited slightly less female stereotyping. When one looks at the combined scores (sex-fair stereotyping), it can be seen that EBCE students are stereotyping less and the comparison students are also sex-stereotyping slightly less. Although the fifth hypothesis must be rejected--EBCE students did not develop significantly less sex-role stereotyping than comparison students--the trend of the results does favor the EBCE program operation.

Hypothesis 6

The sixth hypothesis associated with student outcome data related to locus of control: EBCE students will develop significatnly more internally (therefore less externally) oriented locus of control than comparison students. Data used to evaluate the sixth hypothesis were students' scores on the ANS-IE instrument. Analysis of variance (ANOVA) procedures were used to test the hypothesis.

Table 7 presents the data and statistics on the ANS-IE outcomes.

Table 7

The data presented in Table 7 indicate that the two groups were initially equivalent. When posttest scores were analyzed the comparison group had significantly lower scores than the EBCE group.

Table 7

ANS-IE Data

(0-40 points)

	E - pre	C - pre	E - post	C - post
n	38	35	38	35
$\bar{X}$	13.9	11.9	15.0	11.3
s	4.4	4.8	4.4	5.3
range	7-25	5-22	5-27	2-21
F	3.75		10.52*	
p	nsd		.005	

*$F_{.005}(1,71) = 8.44$

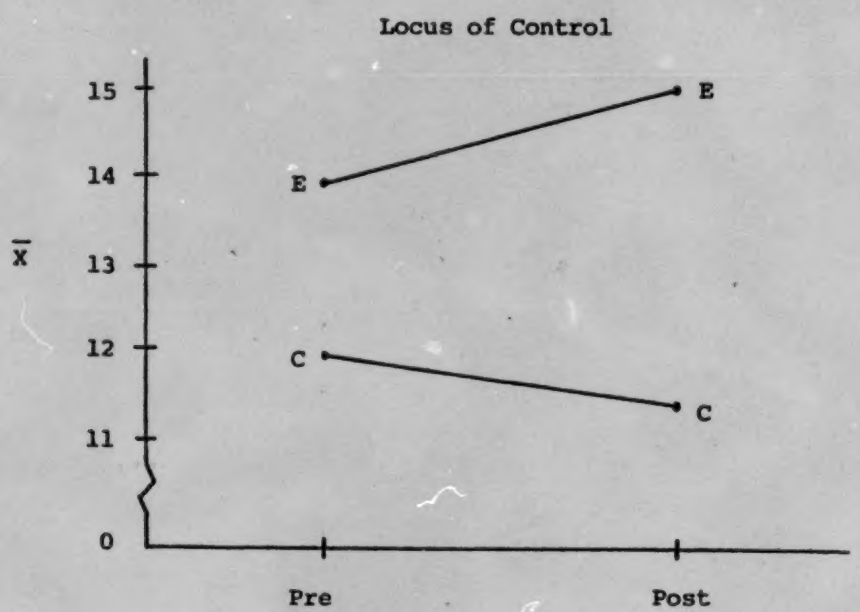


Figure 6

ANS-IE Data

Figure 6 graphically displays the results from the ANS-IE instrument.

Figure 6

From Figure 6 it can be seen that EBCE students developed more externally (and therefore less internally) oriented locus of control; whereas the comparison students degree of external control decreased. The sixth hypothesis must be rejected--EBCE students did not develop significantly more internal locus of control than the comparison group. In fact, for the two groups of students used in the comparison, the EBCE program does not appear to increase internality and reduce externality.

Additional Student Hypotheses

Although not part of the overall evaluation plan, two additional research hypotheses were developed and student data were collected to test them. The first additional hypothesis related to attitude towards self: EBCE students will develop significantly more positive attitudes toward self than will comparison students in a traditional high school. The second additional hypothesis related to attitude of self towards others: EBCE students will develop significantly more positive attitudes toward others than will comparison students. Data used to test the first additional hypothesis were students' scores on Part 3 of the SAS and data used to test the second additional hypothesis were students' scores on Part 4 of the SAS. Analysis of variance (ANOVA) procedures were utilized to test both of the additional hypotheses.

Table 8 presents the statistics on the student outcomes on Part 3 and Part 4 of the SAS.

Table 8

Data presented in Table 8 show that the EBCE and comparison students had equivalent pretest scores on Part 3 (self) and Part 4 (others) of the SAS. ANOVA results on posttest scores of Part 3 and Part 4 of the SAS indicated no significant differences between the two groups of students.

Figure 7 graphically displays the test results from Part 3 (self) and Part 4 (others) of the SAS.

Figure 7

From Figure 7 it can be seen that EBCE students showed a slight rate of positive growth in attitudes toward self and toward others. The comparison students also showed an increase in attitudes toward self and others.

Thus based on the data in Table 8 and Figure 7, the first additional hypothesis was rejected and the second additional hypothesis was also rejected. EBCE students did not develop significantly more positive attitudes toward self than did comparison students; similarly, EBCE students did not develop significantly more positive attitudes toward others.

Parent Data

Although students are the main respondent group impacted by the program, the parents of EBCE students also have an interest in the program. Their cooperation and support are essential for continued program operation.

Table 8

SAS - Parts 3 and 4 Data

	E - pre	C - pre	E - post	C - post
SAS - Part 3: Self (19-95 points)				
n	38	37	38	37
$\bar{X}$	65.8	67.3	68.9	70.4
s	10.7	10.2	11.9	11.4
range	48-88	48-88	40-89	40-91
F	0.42		0.28	
p	nsd		nsd	
SAS - Part 4: Others (13-65 points)				
n	38	37	38	37
$\bar{X}$	46.2	46.5	46.8	48.5
s	9.6	8.6	7.6	7.5
range	23-63	15-64	33-65	31-65
F	0.02		1.00	
p	nsd		nsd	

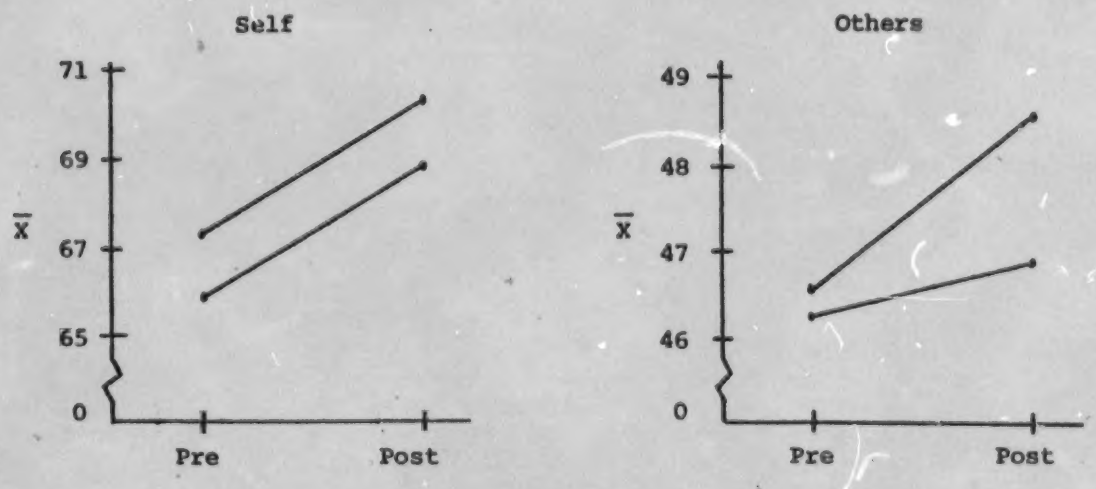


Figure 7

SAS Parts 3 and 4 Data

Hypothesis 7

The seventh hypothesis stated that parents of EBCE students would have positive attitudes toward the EBCE program. The data used to test this hypothesis were from the results of a Parent Opinion Survey which was mailed out to the parents of all 40 students in April, 1979. Responses from 9 parents (23%) were received and tabulated.

Results

Many parents who responded were very positive towards all aspects of the EBCE program. Almost all parents (89%) were enthusiastic about the amount of opportunity the career education program provided their sons and daughters for learning about occupations. Almost all (89%) of the parents felt that EBCE offered their children more or much more opportunity for general learning; all of the parents (100%) rated the approaches to learning used in the EBCE program as very good or excellent.

Over three-fourths of the respondents (78%) thought that their sons or daughters liked the EBCE program better or much better than past school experiences; and 89% indicated that they would allow their children to participate in EBCE if they had this choice to make again.

Parents felt that the greatest strengths of the EBCE program were (by frequency):

1. Exposing them to adult work situations. (4)
2. Smaller class size/individualization. (3)
3. Acquiring knowledge of job requirements. (2)
4. Teaches self-reliance/responsibility. (2)

Parents listed the greatest weaknesses of the EBCE program to be:

1. Insufficient work sites; some sites not well established. (3)
2. Loss of classroom time for regular/difficult subjects. (1)
3. Insufficient on-site exposure. (1)
4. Newness of program creates lack of definition, understanding, and acceptance by students, teachers and employers. (1)

Two-thirds of the respondents thought that the EBCE program had had a good impact on helping their children to formulate career plans. Over three-fourths of the parents (78%) thought that their sons and daughters were more motivated to learn in the EBCE program than they were in traditional schools. Parents also mentioned that they had noticed positive changes in their sons or daughters that might be attributable to participation in the EBCE program: for example, greater career knowledge/interest (4 responses); increased confidence, self-image, responsibility, and ability to meet adults (4 responses); and increased interest in school (1 response).

Only three parents mentioned that they had noted any negative changes in their children that might have resulted from participation in the EBCE program. One parent indicated that their child does not like to take discipline at home (student feels she must run own life) which weakens respect of family unit; one indicated that child wanted part-time job, but now says it's too hard and not enough money; and another says child complains occasionally about the amount of work she is expected to accomplish.

Over 56% of the parents believed that their sons or daughters talked with them frequently about "what's going on in the career education program;" and 44% stated that they had had frequent or very frequent contact with EBCE

staff members. Over three-fourths of the respondents (78%) had attended at least one or two meetings during the school year where other parents of EBCE students were present. Only half (56%) were sure that they had received enough information about their children's progress in the EBCE program--one parent indicated a "definitely NO."

Most parents (78%) rated the general quality of the EBCE program staff as very good or excellent. Two-thirds (67%) rated their overall relationship with members of the EBCE staff as very good or excellent; one rated the relationship as poor. The enthusiasm of the EBCE staff was rated as very good or excellent by all but one parent.

Over half of the parents (56%) indicated confidence in the occupational plans of their sons or daughters, where such plans existed; however, 44% of the parents stated that their sons or daughters had made no firm occupational plans at the time of the survey. Over half (56%) believed that their son or daughter would be attending college one year after graduating from high school; and nearly one-fourth (22%) thought their child would be working at this time. The remainder of the parents thought that one year after leaving high school their son or daughter would be going to a business or trade school or in the military.

Parents were also asked about where they had first heard about EBCE. Sources of initial information about EBCE most frequently mentioned by parents were their own children (56%) and the home high school (44%).

When parents were asked which kinds of students they thought would benefit most from a career education program, there seemed to be little consensus of opinion among the parents. Replies to this question included low economic groups, all levels, non-college bound, students who are

undecided about their future, and students that are thinking of a trade or vocational school.

Based on the data obtained from parents on the Parent Opinion Survey, hypothesis 7 was not rejected. The majority of parents who responded to the questionnaire did exhibit positive attitudes toward the EBCE program.

Employer Data

One of the major groups necessary for operation of an EBCE program is the experience site resource persons. They serve as the instructors in the community sites, provide input to students, and serve as resources for experiential learning activities.

Hypothesis 8

The eighth hypohtesis stated that experience site resource persons and community instructors (frequently designated as "employers") at various levels of their organizations would have positive attitudes toward the EBCE program. The data used to test this hypothesis were gathered from the Employer Questionnaire which was mailed to employers by AEL in April of 1979. Sixty-six (66) experience sites were surveyed for the FY'79 school year. The 66 employers at the experience sites received the questionnaires in the mail during the first week of April. Even though employers were requested to return them by May 17, questionnaires which were received before July 31 were included in the tabulation. Thirty-eight (38) experience site personnel (58%) returned completed questionnaires to AEL.

Results

Most employers were positive toward the EBCE program. They complimented EBCE strengths and offered suggestions for program improvement. Seventy-nine percent (79%) of the employers believed that their organizations would continue to participate in the EBCE program in coming years and 13% were unsure or didn't know of their organizations' plans to continue participation in the EBCE program; three of the employers did not respond.

Most (89%) of the employers felt that the EBCE staff had provided them with the necessary information to direct students' activities, and 82% felt that the EBCE program functioned as they had been initially led to believe.

Many (82%) of the employers believed that the EBCE students who had been placed with them were interested in their organization. Employers indicated that students placed at their sites frequently spent time in actively observing site activities (92%), talking with experience site personnel (67%), and actively performing site activities (63%).

Experience site personnel often rendered various supportive services to EBCE students. The following services were frequently or occasionally rendered to students by employers:

1. Talked about activities at the job site (100%);
2. Talked about job opportunities (100%);
3. Supervised students performing job-related tasks (84%);
4. Helped plan students' assignments (79%); and
5. Evaluated individual student assignments sheets (68%).

However, 74% of the employers seldom or never assisted students in non-job related assignments, 74% seldom or never tutored in an academic area, and 74% seldom or never talked about students' personal problems.

Half of the employers (50%) believed that the greatest strengths of the EBCE program were in the areas of career awareness, career planning, and decision-making. They felt EBCE was an excellent opportunity for students to examine different career areas, enabling them to explore different careers through first-hand experience from a practical viewpoint. Some (10%) also felt that the EBCE staff was qualified, devoted, interested in each student, and conscientious.

Almost all employers reported favorable reactions toward EBCE students from employees and top-level management. Almost all (92%) of the employers' comments mentioned favorable reactions toward EBCE students from employees, and most (81%) of the employers' comments mentioned favorable reactions toward EBCE students from top-level management.

One-third (34%) of the respondents believed that the EBCE students' presence at their experience site had no effect on the quality of the employees' work; 39% felt the EBCE students' presence had some impact and 87% of those felt it was a good impact. Of the respondents, 45% felt the students had no effect on the amount of work produced; and of the 32% who thought the students' presence had some impact, 83% perceived the effect to be positive. Sixty-three percent felt that the students had no impact on the company hiring practices. Fifty-five percent believed the students had no impact on the company training policies, and of the 18% who thought the students had impacted their training policies, 86% believed that effect to be positive. Where an impact was reported, it was usually positive; however, many respondents perceived no impact whatsoever on company policies and practices.

Over half (53%) of the employers received feedback from the EBCE staff in regard to the students' progress after leaving the site; many of the employers (55%) felt the program was moderately effective. Some of their suggestions for improvement were as follows:

1. Better selection/screening of students;
2. Students need to be placed at one site for a greater length of time;
3. More time on site by EBCE staff;

Based on the data obtained from the employer questionnaires, hypothesis 8 was not rejected. The majority of experience site resource personnel at various levels of their organizations did exhibit positive attitudes toward the EBCE program.

EBCE Staff Data

Six EBCE staff members (2 ARC teachers, 2 Counselor/Career Coordinators, 1 Site recruiter/Analyst, and 1 Project Director) rated various learning strategies in the EBCE program. Data are presented in Table 9.

Table 9

The staff members rated all of the learning strategies as being important to highly important (3, 4 or 5); however, the effectiveness of one strategy (student negotiation) was questioned. Only one stragety (student orientation) was rated highly important (5) by all six staff members. Individualized math and English activities, group activities, and learning level activities were rated highly important (5) by five staff members.

Table 9

EBCE Staff Ratings of Learning Strategies

(Frequencies)

Learning Strategies	How Important: Not Important 1	2	3	4	Highly Important 5	How Effective: Not Effective 1	2	3	4	Highly Effective 5	NA
a. Student Orientation	-	-	-	-	6	-	-	-	4	2	-
b. Student Accountability System	-	-	-	3	3	-	-	5	1	-	-
c. Student Negotiation	-	-	1	1	1	-	1	-	1	1	3
d. Preprepared Projects	-	-	2	2	1	-	-	1	2	2	1
e. Negotiated Projects	-	-	1	2	2	-	-	1	3	1	1
f. Journals	-	-	-	1	3	-	-	1	2	1	2
g. Competencies	-	-	-	3	3	-	-	2	3	1	-
h. Exploration Packages	-	-	-	-	4	-	-	-	3	1	2
i. Learning Level Activities	-	-	1	-	5	-	-	1	4	1	-
j. Special Placements	-	-	-	1	5	-	-	-	3	3	-
k. Employer Seminars	-	-	1	2	-	-	-	1	2	-	3
l. Student Retreat	-	-	-	2	-	-	-	-	1	1	4
m. Specialization Activities	-	-	1	-	3	-	-	1	1	2	2
n. Individualized Math Activities	-	-	-	-	5	-	-	-	2	3	1
o. Individualized English Act.	-	-	-	-	5	-	-	-	3	2	1
p. Group Activities	-	-	-	-	5	-	-	-	2	3	1

The staff also rated 23 areas of program impact. Results are presented in Table 10.

Table 10

From Table 10 it can be seen that of the 23 listed areas the staff rated 10 areas as having been helped (4 or 5) by students participating in EBCE. The most positively-rated area (h) dealt with helping students learn how their abilities and interests fit into potential careers.

The staff cited these factors as all being major contributors to the success of the EBCE program:

1. Enthusiasm and availability of community businesses,
2. Full-time site analyst,
3. Individually working with students, and
4. Beginning at first of year (not mid-year).

They believed the major obstacles limiting the program's success were:

1. Student immaturity and irresponsibility;
2. Lack of faculty and administration acceptance;
3. Low student registration;
4. Lack of leadership/direction on part of director, principal, and other administrators; and
5. Inflexibility of administrators with respect to recruiting strategies and procedures.

The staff noted many sustained improvements occurring in their EBCE students:

Table 10

EBCE Staff Ratings of Program Impact

(Frequencies)

How helpful have EBCE experiences been in helping students . . .	Very Helpful 5	4	3	2	Little or no help 1
a. Understand the role of science in our society today	-	-	2	2	-
b. Solve problems logically	1	4	1	-	-
c. Get along with others	3	2	1	-	-
d. Understand more about themselves	4	2	-	-	-
e. Develop their own creativity	-	5	1	-	-
f. Understand the democratic process	1	3	1	1	-
g. Learn how society's values, the government and the economy affect the world of work	3	3	-	-	-
h. Learn how their abilities and interests fit into potential careers	5	1	-	-	-
i. Learn how to find and keep a job	3	3	-	-	-
j. Learn to analyze potential jobs	4	2	-	-	-
k. Improve reading skills	2	2	2	1	-
l. Learn necessary basic skills for jobs of interest	1	3	-	1	1
m. Improve oral communication skills	2	3	1	-	-
n. Improve mathematics skills	3	3	-	-	-
o. Know level of basic skills proficiency required in jobs of interest	1	4	1	-	-

Table 10 (Cont'd)

EBCE Staff Ratings of Program Impact

(Frequencies)

How helpful have EBCE experiences been in helping students . . .	Very Helpful 5	4	3	2	Little or no help 1
p. Improve written communications skills	-	5	1	-	-
q. Become acquainted with resources useful in gaining information for work and decision making	3	3	-	-	-
r. Gain confidence in applying basic skills to complete tasks and solve problems	3	-	3	-	-
s. Take responsibility for their own actions	1	2	3	-	-
t. Communicate with adults	3	3	-	-	-
u. Use direct experience information in making decisions	3	2	1	-	-
v. Become more open to values and ideas different from their own	1	5	-	-	-
w. Feel prepared to accept adult responsibility	1	3	2	-	-

1. Improved verbal, analytical, and communications skills;
2. Increased self-confidence, self-esteem, responsibility, and respect for others; and
3. Awareness of career information.

In addition, they cited the following minimal growths in:

1. Attendance,
2. Completing assigned written work on time,
3. Academics, and
4. Personal responsibility.

The staff felt that the program had no (or very little) effect on the traditional high school program. Federal programs are not well received and traditional programs (faculty and administrators) still regard EBCE as something less important than college-bound courses. They still do not see that both programs can effectively complement the educational process.

The staff also perceived the program as having had the following impacts on the community:

1. Awareness among community personnel that the school system is attempting career education, and are thus willing to participate and provide support; and
2. The community is seeing young adults in action--that they are responsible and interested in learning.

The following suggestions were made for program changes:

1. Utilize English ARC aide who is degreed and possesses clerical skills,

2. Increase student enrollment (including more talented ones),

3. Increase opportunity for on-site career development, and

4. More parental involvement with students.

The staff indicated that many changes have already been made (with no input from them) for next year. One staff member contended that the many changes which are supposed to occur next year will really serve only to reduce the EBCE element and infuse it into the traditional program.

Process Data

While some areas of evaluation were oriented towards the collection, processing, and analysis of rather objective and quantifiable data, other areas were associated primarily with the analysis and synthesis of more subjective and qualitative data. This section briefly deals with those data and insights gathered through observation of the implementation process and procedures utilized in the High Point EBCE program and through interacting with EBCE staff and students.

In general, this project has been on schedule and has operated smoothly. There appeared to be evidence of professional growth by the staff in understanding the EBCE concepts, as well as the operational procedures of the program. Positive aspects of the project included the general quality of the staff, cooperation by the community employers, and enthusiasm of all concerned --EBCE staff, students, parents, employers, and school personnel.

The leadership from the project coordinator and her understanding of the EBCE concepts has allowed her to relate well to most aspects of the program and to successfully implement the management plan. With her daily

input to the planning and operation activities of the program, it did appear that the program was proceeding according to schedule with success in accomplishing many of the process objectives. The more intense involvement of the school principal in administration and decision-making has also benefitted the program's operation. The employment of a full-time Site Analyst has also had a positive impact on program operation. The lack of a specific Community Advisory Council giving direct input to the program may well have slowed the implementation process.

While curriculum and instruction activities appeared to have some deficiencies, there were positive gains in interrelating career exploration activities and academic requirements; this has increased the potential of the program for providing a broad scope of information and experience to participants.

Adequate physical facilities were provided for the staff and students at the learning center. These facilities include quiet offices for conducting individual conferences with students, and for making phone calls by the "placement coordinator" for purposes of recruitment, utilization, and site maintenance. While counseling/instructional office/classroom space appears to be adequate, partial walls have provided visual privacy but have not provided oral/auditory privacy necessary for carrying on confidential conversations. The securing of separate facilities for the director has, for her role of dissemination/demonstrator/outreach coordinator, increased the likelihood of success.

Although external dissemination activities during the second year increased, it is very important that the program be institutionalized into

the High Point curricular offerings by the end of the third year. If institutionalization does not occur, then the use of Project CLETE as a fertile seed for the growth of other local or regional EBCE projects (a goal of USOE) will not occur. The administrative involvement has made it possible for the program to develop to its current degree. Long range acceptance and support by the administration and the public will ensure the continuation of EBCE in High Point in the future.

SUMMARY AND CONCLUSIONS

An alternative educational program titled Experience-Based Career Education (EBCE) was designed, developed, and tested by Research for Better Schools (RBS), using both U. S. Office of Education (USOE) and National Institute of Education (NIE) monies. The purpose of the program was to provide an alternative educational experience for a cross-section of high school age youths. This alternative educational experience was to be characterized by an emphasis on direct employer-site experiences personalized to each student in terms of individual needs, interests, and abilities. The program integrated academic requirements and work experience opportunities into a comprehensive curriculum.

Based on national public concern and national government priorities, USOE monies were made available from Part D of the Vocational Education Act for educational agencies to operate and demonstrate the EBCE-type programs. High Point Public Schools, North Carolina, applied for and received a federal grant to operate and demonstrate the RBS model of EBCE. In order that the High Point EBCE program be properly evaluated, an independent third-party evaluation team from the Appalachia Educational Laboratory (AEL) developed and implemented an evaluation and data analysis plan. A summary of the results obtained from implementation of the plan during the second year follows.

Student Data

Assessment instruments were administered to EBCE and comparison students on a pretest/posttest basis. Students completed subtests of the

Comprehensive Tests of Basic Skills (Reading Comprehension, Mathematics Concepts, and Mathematics Applications), the JOBS instrument (sex-role stereotyping), the Attitude Scale of the Career Maturity Inventory (career maturity), the Student Attitude Survey battery (Learning Environment, Work, Self, Others), the Nowicki-Strickland Scale (locus of control), and a Student Information Questionnaire (demographic data).

Demographic Data. Analysis of demographic data indicated that in the Comparison group, as contrasted with the EBCE group, there were more females (77% vs 51%), more whites (65% vs 36%), better educated fathers and mothers, and more fathers employed in professional/administrative occupations.

Basic Academic Skills. Analysis of student outcome data indicated mixed results. Analysis of scores on standardized basic skills tests (CTBS) indicated that EBCE students did as well as comparison students on reading comprehension and math concepts; comparison students did significantly better than EBCE students on math applications. Hence it can be concluded that EBCE students acquired facilitation in some basic skills to the same degree as comparison students enrolled in the traditional high school.

Career Knowledge and Planning. Analysis of scores on Part 2 of the SAS battery indicated that students did not acquire significantly greater mastery in career knowledge nor in career planning. Similarly, the EBCE students did not acquire significantly more positive scores in their overall attitudes toward work.

Career Maturity. The EBCE students did not acquire significantly greater career maturity as measured by the CMI. Both comparison students and EBCE students showed growth in this area.

Attitudes: Education. EBCE students did not display significantly more positive attitudes toward various aspects of education and toward the total learning environment than did comparison students as measured by Part 1 of the SAS. Inspection of the data showed that: 1) on five subscores comparison students scored higher initially than EBCE students, 2) EBCE students showed positive growth on one subscore, 3) comparison students showed decreases on all five subscores, and 4) EBCE students did not score significantly higher than comparison students on the posttests.

Sex-role stereotyping. Although EBCE students were initially sex-role stereotyping more than comparison students, it was not a significant difference. During the project duration, EBCE students began stereotyping less as did the comparison students. Although persons working in non-traditional roles in High Point are not non-existent, the impact of sex-fair counseling, sex-role awareness activities, sex-fair materials, and site placements is evidenced in the data when one examines the rate of change for EBCE versus comparison students.

Locus of Control. The EBCE and comparison students were equally externally controlled at the beginning of the semester. By the end of the school year, EBCE students were more externally controlled and comparison students were more internally controlled.

Self and Others. Additional hypotheses about attitudes toward self and toward others were also tested. Analysis of data indicated that EBCE students did not develop significantly more positive attitudes toward self or others than did the comparison students. Both groups developed more positive attitudes during the school year; hence, differences between groups were not significant.

Parent Data

A questionnaire was mailed to parents of all 40 EBCE students to assess their attitudes about the EBCE program. Only 9 parents (23%) responded to the questionnaire. Most parents who responded were very positive towards all aspects of the program. Over three-fourths (78%) of the respondents thought that their sons or daughters liked the EBCE program much better than past school experiences and, furthermore, 89% indicated that they would allow their children to participate in EBCE if they had the choice to make again.

Although the parents who responded expressed very positive attitudes toward the EBCE program, three-fourths of the parents failed to complete and return the questionnaire. The authors can only speculate as to the meaning--positive attitudes, ambivalence or apathy, or negative perceptions.

Employer Data

A questionnaire was mailed to 66 community instructors at 59 different experience sites. There were 38 employers (58%) who responded to the questionnaire. Most employers who responded were positive towards the program. They complimented the EBCE program strengths and offered suggestions for program improvement. Of those who responded to the items 79% believed that their organizations would continue to participate in coming years, and 55% rated the program as moderately effective. About one-half of the employers believed that the greatest strengths of the EBCE program were in the areas of career awareness, career planning, and decision-making; the greatest weaknesses were that the period of site placement was too short and too

infrequent and that better selection/screening of students was needed. One-third to half of the employers believed that the presence of EBCE students at their experience sites had had no positive impact on either the quantity or quality of work performed by the regular employees.

EBCE Staff Data

The six EBCE staff members rated most of the learning strategies utilized in the EBCE model as important and also indicated that some strategies had been effective in producing student learning (e.g., student orientation). They also contended that the program had been quite helpful in helping students learn how their abilities and interests fit into potential careers.

EBCE staff felt that community support, presence of a full-time site analyst, working individually with students, and September (not January) start-up were the four major components contributing to the success of EBCE. They also felt, however, that variables such as student immaturity/irresponsibility, lack of faculty/administration acceptance, and lack of leadership/direction were obstacles that had limited the success of EBCE.

They also felt that the program had no (or little) effect on the traditional high school program; however, they did perceive that the program positively and substantially impacted the community.

Process Data

Observation of the implementation process was made periodically by the third-party evaluators with formative input being given on an immediate

as-needed basis. Through observation and interaction much subjective and qualitative data were gathered.

The project appeared to be on schedule in terms of control, planning, and management. The general quality of the staff, cooperation by community personnel, and enthusiasm by all concerned helped to get over the hurdles.

There were some perceived weaknesses or problem areas which reduced the potential for a totally successful implementation, including a continued lack of integration of career education and academic activities. The strengths of the program which have contributed to its current status include the quality and enthusiasm of the operations staff and management staff, cooperation of the community, and administrative/Board of Education support. While these have all contributed to the project's present status, enthusiasm of the staff, cooperation from the community, and continued administrative support must not be reduced or diminished.

In conclusion, it appears that the implementation process was progressing satisfactorily, and all major milestone events appeared to have been met and accomplished.

EBCE student accomplishments appeared to be slight. Measured growth in basic skills was equivalent to that experienced by comparison students in traditional high schools (with the exception of math applications). EBCE students' attitudes toward the various aspects of the learning environment, career knowledge, career planning, and career maturity were comparable to comparison students. EBCE students showed no significant gains in reducing their sex-role stereotyping. They developed more externally-oriented locus of control.

It was obvious to the evaluators that the program was operated and managed in an efficient and effective manner. It was also obvious to the evaluators that the students were being impacted in a very positive way. Since the student data do not directly support the program's impact, one may be led to conclude that the program had no impact. In the evaluator's opinion, this is not totally the case. The assessment instruments may have been too insensitive to measure the actual impact of the program.

Finally, the perceptions and attitudes of parents and employers as well as those of the EBCE staff were positively oriented. They complimented the strengths and successes and offered comments and suggestions to alleviate program weaknesses or problem areas.

It is the opinion of the authors that the EBCE program in High Point, North Carolina has successfully provided students with an alternative educational opportunity which is relevant to their needs, interests, and abilities. It is felt that as students become full-fledged members of the world of work, their experiences in Project CLETE will have positively impacted the transition.

Appendix A

Comprehensive Tests of Basic Skills

Comprehensive Tests of Basic Skills (CTBS)

Purpose

The CTBS were designed to provide improved measurement to the extent to which individual students have developed basic academic skills. There are four levels of the tests with alternate forms for each level.

Respondent Group

Students

Item Content

The CTBS battery booklet (Level 4 - Form S) includes tests in several basic skills areas: reading, language, arithmetic, study skills, science and social studies. The areas are divided into 10 separately-timed tests, each utilizing a multiple-choice item format. The 10 tests of the CTBS and a brief description are as follows:

Test 1 - Reading Vocabulary. This 40-item test provides a measurement of a student's ability to select the word that has the best meaning.

Test 2 - Reading Comprehension. This 45-item test is composed of blocks of items which test the reading of such selections as articles, stories, poems, and letters.

Test 3 - Spelling. This 30-item test measures the student's ability to recognize correct and incorrect spelling of words.

Test 4 - Language Mechanics. This 20-item test measures a student's ability to punctuate and capitalize.

Test 5 - Language Expression. This 35-item test measures the correctness and effectiveness of expression.

Test 6 - Mathematics Computation. This test consists of 48 items equally distributed among the four arithmetic operations: addition, subtraction, multiplication, and division.

Test 7 - Mathematics Concepts and Applications. The first 25-item test measures the student's ability to recognize and/or apply the appropriate concept and technique; the ability to convert concepts from one form to another; the ability to comprehend numerical concepts and understand their interrelationships; and the ability to organize all facts in more complex problems. The second 25-item test measures a student's problem-solving abilities. Separate scores are reported for each section.

Test 8 - Reference Skills. This 20-item test measures the ability to use reference materials -- to locate various types of information and select the appropriate reference books for specific purposes.

Test 9 - Science. This 40-item test assesses the student's ability to investigate problems in science and recall scientific facts or concepts.

Test 10 - Social Studies. This 39-item test measures the student's grasp of concepts, generalizations, and inquiry skills necessary for effective problem solving in social studies.

Administration Procedures

The CTBS - Level 4 may be completed by any student in grades 8 through 12. The CTBS total battery requires approximately 4½ hours (each test has a working time and time allotted for instructions). The instrument can be administered on an individual as well as a group basis. The complete CTBS battery or any subset of the 10 tests may be administered.

Scoring Procedures

The publisher furnishes a scoring key for hand-scoring or the answer sheets may be sent to the publisher for machine scoring. Percentile conversion tables are available in the manual.

Availability/Price*

Complete Battery	
Booklets	22.40/35
Partial Battery	
Booklets	21.70/35
Answer Sheets (IBM - hand score)	
Reading & Reference Skills	5.00/50
Mathematics	5.00/50
Hand-Scoring Stencils	
Reading & Reference Skills	2.50/1
Mathematics	2.50/1

Order from:

CTB/McGraw-Hill
Order Service Center
Del Monte Research Park
Monterey, CA 93940

Phone: 408/649-8400

*As of 1-1-77

Appendix B

Student Attitude Survey

Student Attitude Survey (SAS)

Purpose

The SAS was designed to provide an instrument for the assessment of student attitudes toward learning environments, career knowledge and planning, self, and others.

Respondent Group

Students

Item Content

There are four parts to the survey. The first 26 items yield four subscale scores and a total composite score on attitudes toward learning environments.

Subscale 1. This subscale consists of 7 items which measure student attitudes toward education in general.

Subscale 2. This subscale consists of 5 items which measure student attitudes toward school curriculum.

Subscale 3. This subscale consists of 9 items which measure student attitudes toward school resources.

Subscale 4. This subscale consists of 5 items which measure student attitudes toward school counseling.

Composite Score. The totality of 26 items measure overall student attitudes toward the learning environment.

The next 22 items yield two subscale scores on career knowledge and career planning. There are 12 items in the career knowledge subscale and 10 items in the career planning subscale.

The third subtest contains 19 items. This subtest assesses students' attitudes toward themselves. The fourth subtest contains 13 items. This subtest measures students' attitudes toward other people.

Administration Procedures

The SAS may be completed by any secondary school student. The SAS takes approximately 25 minutes to administer. Since the item order is randomized within the first 26 items, the subscales cannot be administered separately.

Scoring Procedures

Since many of the items utilize reverse-polarity, hand scoring keys are not available. Machine scoring and profile description sheets may be obtained from the publisher.

Availability/Prices*

Complete Battery	12.50/50
Part 1 only	8.50/50
Scoring	
SAS	.30/student
Part 1	.15/student

Order from: Materials Distribution Center
Research for Better Schools
Suite 1700
1700 Market Street
Philadelphia, PA 19103

*Prices as of 1-1-77

APPENDIX C

Career Maturity Inventory

Career Maturity Inventory (CMI)

Purpose

The CMI was designed to provide an inventory on career choice attitudes and on career choice competencies.

Respondent Group

Students

Item Content

The CMI provides two types of measures: the Attitude Scale and the Competence Test. The Competence Test contains five parts. A brief description of the CMI follows:

Attitude Scale. This is a measure of the feelings, the subjective reactions, the dispositions that the individual has toward making a career choice and entering the world of work. Five attitudinal clusters are surveyed: involvement in the career choice process; orientation towards work; independence in decision-making; preference for career choice factors; and conceptions of the career choice process.

Competency Test. This provides an inventory of students' abilities, knowledge or orientation as related to several aspects of the world of work.

Part 1: Knowing Yourself (self-appraisal)

Part 2: Knowing About Jobs (occupational information)

Part 3: Choosing A Job (goal selection)

Part 4: Looking Ahead (planning)

Part 5: What Should They Do (problem-solving)

Administration Procedures

The CMI may be completed by any student in grades 6 through 12 (senior year of college for the attitude scale). The CMI can be administered in approximately 2½ hours (each part takes approximately 20 minutes). The instrument can be administered on an individual as well as group basis. The complete CMI battery or any subset of the six parts of the CMI may be administered.

Scoring Procedures

The publisher furnishes a scoring key for hand scoring or the answer sheets can be sent to the publisher for scoring. Percentile conversion tables are available in the manual.

Availability/Price*

Complete Inventory	$23.45/35
Attitude Scale	6.65/35
Competence Test	18.20/35
Answer Sheets (IBM - hand score)	5.00/50
Hand Stencils	2.50/1

Order from: CTB/McGraw-Hill
Order Service Center
Del Monte Research Park
Monterey, CA 93940

Phone: 408/649-8400

*Price as of 1-1-77

Appendix D

JOBS

JOBS

Purpose

The JOBS instrument was designed to provide an assessment of degree of sex-role stereotyping demonstrated by individuals. This AEL-developed instrument is based on activities in the AEL/EBCE Student Career Guide. It is an experimental instrument.

Respondent Groups

Students and other adults.

Item Content

The instrument contains a list of 30 occupations. Students mark the occupations in terms of whether the job can best be performed by a man (M) or a woman (W), or performed equally well by either sex (B).

Administration Procedures

The JOBS instrument may be completed by secondary or post-secondary students, or other adults. The instrument requires about 15 minutes to complete.

Scoring Procedures

Three scores are obtained: frequencies of M, W and B responses. These three scores can be utilized to assess degree of change in stereotyping.

Availability/Price

The local implementation site is permitted to duplicate/revise this instrument at their own expense.

Name _____ Date _____

School _____ City _____ State _____

JOBS

INSTRUCTIONS: Below is a list of jobs. Use the following code to mark each item:

M - this job can best be performed by a man.

W - this job can best be performed by a woman.

B - this job can be performed equally by either a man or woman.

_____ nurse

_____ mechanic

_____ surgeon

_____ lawyer

_____ electrician

_____ machinist

_____ secretary

_____ babysitter

_____ veterinarian

_____ pilot

_____ shop teacher

_____ farmer

_____ stock broker

_____ creative writer

_____ dental hygienist

_____ plumber

_____ beautician

_____ scientist

_____ telephone operator

_____ clothes designer

_____ accountant

_____ dispatcher

_____ cashier

_____ counselor

_____ truck driver

_____ engineer

_____ detective

_____ mortician

_____ receptionist

_____ insurance agent

Appendix E

Nowicki-Strickland
ANS-IE

Nowicki-Strickland Scale (ANS-IE)

Purpose

The ANS-IE was designed to assess the extent to which an individual's locus of control is internalized or externalized.

Respondent Group

Students and other adults.

Item Content

The adult form contains 40 items with a Yes-No response mode.

Administration Procedures

The ANS-IE may be completed by students and other adults by circling their response (Yes or No) for each of the 40 items. The instrument requires about 20 minutes to complete.

Scoring Procedures

A single score is obtained by counting the frequency of externally-endorsed responses.

Availability/Price

Information on availability/prices/scoring keys may be obtained from:

Experiential Education Division
Appalachia Educational Laboratory
P. O. Box 1348
Charleston, WV 25325

Appendix F

Student Information Questionnaire

Student Information Questionnaire (SIQ)

Purpose

The SIQ was designed to obtain data on basic demographic variables.

Respondent Group

Students (EBCE and comparison/control).

Item Content

The 11-item questionnaire provides information on race, sex, grade level, age, parents' educational levels and occupations, and long and short-range goals.

Administrative Procedures

The SIQ is usually the first instrument that is administered in the pretest battery. It is untimed but is usually completed by students in 5-10 minutes.

Scoring Procedures

Each item is scored and analyzed separately. For those items utilizing a scalar response, descriptive statistics and tabulations are used. For those items requiring an open response, tabulations are used.

Availability/Price

The local implementation site is permitted to duplicate this instrument at their own expense.

NAME _____ DATE _____

SCHOOL _____ CITY _____ STATE _____

EBCE STUDENT: ☐ YES ☐ NO

STUDENT INFORMATION QUESTIONNAIRE

1. Are you:

   ☐ Male

   ☐ Female

2. Are you:

   ☐ White

   ☐ Black

   ☐ Oriental

   ☐ Spanish Descent (Chicano, Puerto Rican, etc.)

   ☐ Native American

   ☐ Other (specify) _____

3. What is your current grade level?

   ☐ 10th grade

   ☐ 11th grade

   ☐ 12th grade

4. What is your birth date?

   _____ _____ _____
   MONTH DAY YEAR

5. What is your father's highest level of formal education completed?

- ☐ None
- ☐ Elementary School
- ☐ Some High School
- ☐ High School Graduate
- ☐ Some post-secondary (for example, some college, junior college, business school, trade or technical school)
- ☐ College graduate (four-year degree)
- ☐ Some graduate work
- ☐ Advanced degree (specify) _____

6. What is your mother's highest level of formal education completed?

- ☐ None
- ☐ Elementary School
- ☐ Some High School
- ☐ High School Graduate
- ☐ Some post-secondary (for example, some college, junior college, business school, trade or technical school)
- ☐ College graduate (four-year degree)
- ☐ Some graduate work
- ☐ Advanced degree (specify) _____

7. How many of your brothers and sisters dropped out of school?

- ☐ None
- ☐ One
- ☐ Two
- ☐ Three
- ☐ Four
- ☐ Five or More

8. What are your long-range goals? Check only one.

- ☐ 1. CLERICAL such as bank teller, bookkeeper, secretary, typist, mail carrier, ticket agent
- ☐ 2. CRAFTSMAN such as baker, automobile mechanic, machinist, painter, plbmber, telephone installer, carpenter
- ☐ 3. FARMER, FARM MANAGER
- ☐ 4. HOMEMAKER OR HOUSEWIFE
- ☐ 5. LABORER such as construction worker, car washer, sanitary worker, farm laborer
- ☐ 6. MANAGER, ADMINISTRATOR such as sales manager, office manager, school administrator, buyer, restaurant manager, government official
- ☐ 7. MILITARY such as career officer, enlisted man or woman in the armed forces
- ☐ 8. OPERATIVE such as meat cutter; assembler; machine operator; welder; taxicab, bus, or truck driver; gas station attendant
- ☐ 9. PROFESSIONAL such as accountant, artist, clergyman, dentist, physician, registered nurse, engineer, lawyer, librarian, teacher, writer, scientist, social worker, actor, actress
- ☐ 10. PROPRIETOR OR OWNER such as owner of a small business, contractor, restaurant owner
- ☐ 11. PROTECTIVE SERVICE such as detective, policeman or guard, sheriff, fireman
- ☐ 12. SALES such as salesman, sales clerk, advertising or insurance agent, real estate broker
- ☐ 13. SERVICE such as barber, beautician, practical nurse, private household worker, janitor, waiter
- ☐ 14. TECHNICAL such as draftsman, medical or dental technician, computer programmer
- ☐ 15. OTHER (specify) _____
- ☐ 16. DON'T KNOW

9. What do you expect to be doing one year after completing high school?

- ☐ Working full-time
- ☐ Entering an apprenticeship or on-the-job training program
- ☐ Going into regular military services or to a service academy
- ☐ Being a full-time homemaker
- ☐ Attending a vocational, technical, trade or business school
- ☐ Taking academic courses at junior or community college
- ☐ Taking technical or vocational subjects at a junior or community college
- ☐ Attending a four-year college or university
- ☐ Working part-time
- ☐ Other (travel, take a break, no plans)

10. What is your major field of study?

- ☐ General Curriculum
- ☐ Vocational Education Curriculum
- ☐ College Preparatory Curriculum
- ☐ Other (specify) _____

11. Under FATHER, circle the one number that best describes the work done by your father (or male guardian). Under MOTHER, circle the one number that best describes the work done by your mother (or female guardian). The exact job may not be listed, but circle the one that comes closest. If either of your parents is out of work, disabled, retired, or deceased, mark the kind of work that he or she used to do.

(Circle one number in each column.)

	FATHER	MOTHER
CLERICAL such as bank teller, bookkeeper, secretary, typist, mail carrier, ticket agent. . .	01.	01
CRAFTSMAN such as baker, automobile mechanic, machinist, painter, plumber, telephone installer, carpenter	02.	02
FARMER, FARM MANAGER	03.	03
HOMEMAKER OR HOUSEWIFE	04.	04
LABORER such as construction worker, car washer, sanitary worker, farm laborer	05.	05
MANAGER, ADMINISTRATOR such as sales manager, office manager, school administrator, buyer, restaurant manager, government official	06.	06
MILITARY such as career officer, enlisted man or woman in the armed forces	07.	07
OPERATIVE such as meat cutter; assembler; machine operator; welder; taxicab, bus, or truck driver; gas station attendant	08.	08
PROFESSIONAL such as accountant, artist, clergyman, dentist, physician, registered nurse, engineer, lawyer, librarian, teacher, writer, scientist, social worker, actor, actress	09.	09
PROPRIETOR OR OWNER such as owner of a small business, contractor, restaurant owner	10.	10
PROTECTIVE SERVICE such as detective, policeman or guard, sheriff, fireman	11.	11
SALES such as salesman, sales clerk, advertising or insurance agent, real estate broker	12.	12
SERVICE such as barber, beautician, practical nurse, private household worker, janitor, waiter	13.	13
TECHNICAL such as draftsman, medical or dental technician, computer programmer	14.	14

Appendix G

Parent Opinion Survey

Parent Opinion Survey (POS)

Purpose

The POS was designed to provide an assessment of parents' opinions about the EBCE program in which their son or daughter is participating.

Repsondent Group

Parents (guardians) of EBCE students.

Item Content

The 10-item inventory identifies parent attitudes toward the EBCE program and permits parents to compare the EBCE program to the traditional high school program in which their children were previously participating.

Administration Procedures

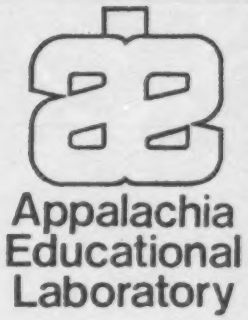
The POS is designed to be completed by the parents in the privacy of their homes. Parents are mailed the POS, a cover letter explaining the purpose of the instrument, and a stamped return envelope. They are requested to return the completed POS by a specified date. (A telephone call may be necessary to increase the return rate.)

Scoring Procedures

Each item is scored and analyzed separately. For those items utilizing a scalar response, descriptive statistics and tabulations are used. For those items requiring an open-ended response, tabulations are utilized.

Availability/Price

The local implementation site is permitted to duplicate this instrument at their own expense.



April 2, 1979

Dear Parents:

During the past year your child has participated in an Experience-Based Career Education (EBCE) program, called Project CLETE. Appalachia Educational Laboratory has a contract with the High Point Public Schools to do an independent evaluation of the federally-funded EBCE program. It is extremely important that we receive some information from you concerning your thoughts and attitudes toward Project CLETE. Your responses are therefore an important part of a national attempt to evaluate the EBCE project.

I will be responsible for analysis of the information obtained on the questionnaire. Your responses will be carefully coded so that confidentiality will be preserved. None of the teachers or administrators of the EBCE program will see your questionnaire. They will see a summarization of all the questionnaires in a Final Evaluation Report.

If you have any questions or concerns about any of the items, please feel free to call me toll free at 800/624-9120. Please return the questionnaire in the enclosed envelope by April 17.

Thank you again for taking your valuable time to assist us in evaluating and improving the EBCE program.

Sincerely,

Joe E. Shively

Joe E. Shively, Ph.D.
Director of Evaluation
Experiential Education Division

JES:CD

Enclosure

cc: Ms. Marion Erath

Appalachia Educational Laboratory, Inc. • Experiential Education Division
20th and MacCorkle Avenue, SE • Charleston, West Virginia 25304 • (304) 344-8371
An Affirmative Action / Equal Opportunity Employer

PARENT OPINION SURVEY

This survey is meant to give you an opportunity to express your opinions about the Experience-Based Career Education Program your son or daughter has been participating in. Most of the questions are to be answered on a scale of numbers from (1) to (5). The phrases at the top and bottom of each set of questions indicate what the scale means. A (1) may mean something like "Definitely No"; if you feel strongly that the answer to the questions is No, then you should circle the (1). A (5) may mean "Definitely Yes"; if you feel strongly that the answer is Yes, then you should circle the (5). The numbers in between (2, 3, 4) indicate an opinion somewhere in between "Definitely No" and "Definitely Yes." Some scales have different phrases, but they all work the same way.

Read the phrase above the numbers so you know what the scale means, then read each question, and circle the number which is closest to your opinion. There are no right or wrong answers; your thoughts and feelings are the important things in this survey. The answers parents give will help determine how well the program is doing now and improve it in the future. Remember to circle a number for each item. Thank you for taking the time to fill out this survey.

PARENT OPINION SURVEY

1. How well does the EBCE Program compare overall with the past school experiences of your daughter or son?

Much Worse				Much Better
1	2	3	4	5

2. If you had it to do over again, would you want your son or daughter to participate in the EBCE Program?

Definitely NO				Definitely YES
1	2	3	4	5

3. How well do you think your son or daughter likes the EBCE Program compared with past school experiences?

Much Worse				Much Better
1	2	3	4	5

4. What do you think are the greatest weaknesses of the EBCE Program?

_____

_____

_____

_____

5. What do you think are the greatest strengths of the EBCE Program?

_____

_____

_____

_____

6. Have you received enough information about your son's or daughter's progress in the EBCE Program?

Definitely NO				Definitely YES
1	2	3	4	5

7. In comparison with regular schools, how much opportunity did the EBCE Program provide your daughter or son for learning about occupations?

Much Less				Much More
1	2	3	4	5

8. What effect, if any, has the EBCE Program had on helping your son or daughter form career plans?

Definitely Bad				Definitely Good
1	2	3	4	5

9. In comparison with regular schools, how much opportunity did the EBCE Program provide your daughter or son for general learning?

Much Less		About the Same		Much More
1	2	3	4	5

10. In comparison with past experiences in regular schools, how motivated is your daughter or son to learn in the EBCE Program?

Much Less		About the Same		Much More
1	2	3	4	5

11. How would you rate the approaches to learning used in the EBCE Program?

Poor				Excellent
1	2	3	4	5

12. What positive changes have you noticed in your son or daughter that might be a result of participation in the EBCE Program?

_____

_____

_____

13. What negative changes have you noticed in your son or daughter that might be a result of participation in the EBCE Program?

_____

_____

_____

14. How often does your son or daughter talk to you about what's going on in the EBCE Program?

Almost Never				Almost Daily
1	2	3	4	5

15. About how often have you had any contact with any EBCE Program staff members?

Almost Never				Very Frequently
1	2	3	4	5

16. How many meetings have you attended during this school year where other parents of EBCE students were present?

None	1	2	3	4 or More

17. How would you rate the general quality of the EBCE Program staff?

Poor				Excellent
1	2	3	4	5

18. How would you rate the business or community resources available in the EBCE Program?

Poor				Excellent
1	2	3	4	5

19. How would you rate your overall relationship with the staff of the EBCE Program?

Poor				Excellent
1	2	3	4	5

20. How would you rate the enthusiasm of the EBCE Program staff?

Poor				Excellent
1	2	3	4	5

21. What do you think of the occupational plans of your daughter or son?

a. ___ There aren't any firm plans yet.

b. ___ The plans should be changed.

c. ___ The plans seem to be good.

d. ___ We haven't really had a chance to discuss the plans.

22. What do you think your son or daughter will be doing a year after high school?

a. ___ Working

b. ___ Attending some kind of college

c. ___ Going to a business or trade school

d. ___ Military

e. ___ Other (please specify) _____

23. How did you first hear about the EBCE Program?

_____

24. What kinds of students do you think benefit most from the EBCE Program?

_____

_____

Appendix H

Employer Questionnaire

Employer Questionnaire (EQ)

Purpose

The EQ was designed to provide an assessment of community persons' opinions about the EBCE program to which they have devoted time and resources.

Respondent Group

Community Employers/Resource Persons

Item Content

The 9-item questionnaire identifies community employers/resource persons' attitudes toward the EBCE program and elicits the degree of their support for continued participation.

Administrative Procedures

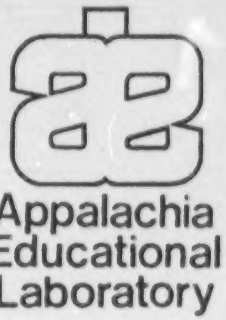
The EQ is designed to be completed by the community personnel in their places of business. Community employers/resource persons are mailed the EQ, a cover letter explaining the purpose of the instrument, and a stamped, self-addressed return envelope. They are requested to return the completed EQ by a specified date. (A telephone call may be necessary to increase the return rate.)

Scoring Procedures

Each item is scored and analyzed separately. For those items utilizing a scalar response, descriptive statistics and tabulations are used. For those items requiring an open-ended response, tabulations are utilized.

Availability/Price

The local implementation site is permitted to duplicate the EQ at their own expense.



April 2, 1979

Dear Community Instructor:

Your organization has been most helpful to the local Experience-Based Career Education (EBCE) Program, called Project CLETE, by contributing time and resources, thus providing students with an opportunity to learn. Appalachia Educational Laboratory has a contract with the High Point Public Schools to do an independent third-party evaluation of the federally-funded EBCE program. It is extremely important that we find out what you who work with our students think about Project CLETE. A questionnaire was developed to help us to obtain some of this needed information. I would like you to complete the enclosed qeustionnaire and return it to me in the enclosed stamped envelope.

I will be responsible for analysis of the data obtained on the questionnaire. I would like to assure you that the carefully coded information obtained from this questionnaire will remain confidential and will not be seen by anyone in the EBCE project. Printed reports of the data will contain only summary information and will not contain specific names of individuals or organizations.

If there are any questions about the procedures or any of the items on the questionnaire, please feel free to call me at 800/624-9120. I would appreciate it if the completed questionnaires were returned in the enclosed envelope by April 17.

Thank you for taking your valuable time to provide us with this most helpful information.

Sincerely yours,

Joe E. Shively

Joe E. Shively, Ph.D.
Director of Evaluation
Experiential Education Division

JES:cd

Enclosures

cc: Ms. Marion Erath

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20th and MacCorkle Avenue, SE • Charleston, West Virginia 25304 • (304) 344-8371
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EMPLOYER QUESTIONNAIRE

Name of Resource Person _____

Name of Company _____

Questions

1. Did the EBCE staff provide you with the necessary information to help you direct students' activities at your site?

   Yes _____ No _____ Sometimes _____

2. Did the EBCE staff usually:

   _____ Show you the Student Activity Sheet(s)

   _____ Show you the Student Program Profile

   _____ Show you the type of products expected from student

   _____ Explain reason for the particular placement

   _____ Provide you with feedback on student's progress

3. Which of the following supportive services do you (or others at your site) provide for the Experience-Based Career Education (EBCE) program students? (Check each appropriate category.)

	Frequently	Occasionally	Seldom	Never
Do you talk about job opportunities?	_____	_____	_____	_____
Do you talk about the students' personal problems?	_____	_____	_____	_____
Do you talk about activities at your site?	_____	_____	_____	_____
Do you tutor in an academic area?	_____	_____	_____	_____
Do you evaluate individual students' assignments?	_____	_____	_____	_____

	Frequently	Occasionally	Seldom	Never
Do you assist students in non-job related assignments?	_____	_____	_____	_____
Do you supervise students to perform a specific job-related task at your site?	_____	_____	_____	_____
Do you help plan student assignments?	_____	_____	_____	_____
Other (specify) _____				
_____	_____	_____	_____	_____

4. How do students spend their time at your site? (Check each appropriate category.)

	Frequently	Occasionally	Seldom	Never
Observing site activities	_____	_____	_____	_____
Researching from site materials	_____	_____	_____	_____
Actively performing site activities	_____	_____	_____	_____
Talking with me	_____	_____	_____	_____
Talking with other site personnel	_____	_____	_____	_____
Individual study	_____	_____	_____	_____
Other (specify) _____				
_____	_____	_____	_____	_____

5. Do you think the EBCE students have been interested in your site?

Yes _____ No _____ Don't know _____

Explain: _____

_____

6. Based on the EBCE students placed at your site, do you feel these students were interested in the concept of EBCE?

   Yes _____ No _____ Don't know _____

7. How have employees at your site reacted to the EBCE students placed at your site? _____

   _____

8. How has top level management reacted to the EBCE students placed here? _____

   _____

9. Have you been satisfied with the feedback that you received relating to what happens to the student after he leaves your site?

   Yes _____ No _____ Comment: _____

   _____

10. Do you think your company will continue working with the EBCE project during the next couple of years?

    Yes _____ No _____ Don't know _____

11. Based on the students and staff you've met, how effective do you feel the program was? _____

    _____

12. Do you feel the program functioned as you were led to believe when you were recruited as an employer site?

    Yes _____ No _____ Don't know _____

13. What do you feel the strengths of the EBCE Program are?

    _____

    _____

14. What do you feel the weaknesses of the EBCE Program are?

_____

_____

15. To what extent has the EBCE Program had an impact on . . . . .?

(Check each appropriate category.)

	How Much Impact				Value of Impact		
	No Impact	Some Impact	Much Impact	Don't Know	Good Impact	Bad Impact	Don't Know
a. Quality of work performed by regular employees	___	___	___	___	___	___	___
b. Amount of work performed by regular employees	___	___	___	___	___	___	___
c. Company hiring practices	___	___	___	___	___	___	___
d. Company training practices	___	___	___	___	___	___	___
e. Other possible impacts (list)							
_____	___	___	___	___	___	___	___
_____	___	___	___	___	___	___	___
_____	___	___	___	___	___	___	___

Appendix I

EBCE Staff Questionnaire

EBCE Staff Questionnaire (SQ)

Purpose

The EBCE Staff Questionnaire was designed to provide an assessment of staff's perceptions and opinions about the EBCE program implemented at their site.

Respondent Group

EBCE Administrators, Learning Coordinators, Counselors and Site Analysts/Placement Coordinators.

Item Content

The 31-item questionnaire elicits staff opinions/attitudes toward the program and its effect on students, community and traditional program.

Administrative Procedures

The SQ is designed to be completed by EBCE staff members. Questionnaires are mailed to Program Director with cover letter and stamped, self-addressed envelopes. They are requested to return the completed SQ by a specified date.

Scoring Procedures

Each item is scored and analyzed separately. For those items utilizing a scalar response, descriptive statistics and tabulations are used. For those items requiring an open-ended response, tabulations are utilized.

Availability/Price

The local implementation site is permitted to duplicate the SQ at their own expense.

Appalachian
Education
Laboratory

April 17, 1979

Ms. Marion Erath
Project CLETE
Central High School
801 Ferndale Boulevard
High Point, NC 27260

Dear Marion:

Enclosed are questionnaires for your staff to complete as part of the 1978-79 third-party evaluation effort. Please have each staff member listed below (including yourself) complete the form and return it by May 1 in the enclosed stamped envelope. Thank you for your cooperation in this matter. If you or any staff member has any questions, please feel free to contact me.

Sincerely yours,

Joe F. Shively, Ph.D.
Director of Evaluation
Experiential Education Division

JES:cd

Enclosures

William Hughes
Linda Hanes
Sara Quinto
Libby Tate
Dolores Parrish

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EBCE STAFF QUESTIONNAIRE

This questionnaire is being utilized to obtain your perceptions and opinions about the implementation of EBCE at your site. Your responses will be coded so that confidentiality will be preserved. None of the other local staff or administrators of the EBCE program will see your completed questionnaire. They will see a summary report of all the questionnaires in the Final Third-Party Evaluation Report. Thank you for again taking your valuable time to assist in evaluating and improving the EBCE program.

Name _____

Site _____

Position _____

1. Listed below are major learning strategies used in one or more EBCE projects. Some strategies may be considered important but not producing effective results, while others may be considered very effective but of low importance. Please rate strategy in terms of how important you feel it is for EBCE students and then in terms of how effective you feel it has been this year. Using the 5-point scale, rate importance and effectiveness by circling the appropriate number on the scale for each learning Strategy. If the strategy is not used in your project, please circle NA for not applicable.

Learning Strategies	How Important (Not Imp. → Highly Imp.)					How Effective (Not Eff. → Highly Eff.)					
a. Student Orientation	1	2	3	4	5	1	2	3	4	5	NA
b. Student Accountability System	1	2	3	4	5	1	2	3	4	5	NA
c. Student Negotiation	1	2	3	4	5	1	2	3	4	5	NA
d. Preprepared Projects	1	2	3	4	5	1	2	3	4	5	NA
e. Negotiated Projects	1	2	3	4	5	1	2	3	4	5	NA
f. Journals	1	2	3	4	5	1	2	3	4	5	NA
g. Competencies	1	2	3	4	5	1	2	3	4	5	NA
h. Exploration Packages	1	2	3	4	5	1	2	3	4	5	NA
i. Learning Level Activities	1	2	3	4	5	1	2	3	4	5	NA
j. Special Placements	1	2	3	4	5	1	2	3	4	5	NA
k. Employer Seminars	1	2	3	4	5	1	2	3	4	5	NA
l. Student Retreat	1	2	3	4	5	1	2	3	4	5	NA
m. Specialization Activities	1	2	3	4	5	1	2	3	4	5	NA
n. Individualized Mathematics Activities	1	2	3	4	5	1	2	3	4	5	NA
o. Individualized English Activities	1	2	3	4	5	1	2	3	4	5	NA
p. Group Activities (e.g., counseling)	1	2	3	4	5	1	2	3	4	5	NA
q. Others (please specify):											

2. How helpful have EBCE experiences been in helping students understand the role of science in our society today?

Very helpful			Of little or no help	
5	4	3	2	1

3. How helpful do you feel EBCE experiences this year have been in helping students solve problems logically?

Very helpful				Of little or no help
5	4	3	2	1

4. How helpful have EBCE experiences been in helping students get along with others?

Very helpful				Of little or no help
5	4	3	2	1

5. How helpful have EBCE experiences been in helping students understand more about themselves?

Very helpful				Of little or no help
5	4	3	2	1

6. How helpful have EBCE experiences been in helping students develop their own creativity?

Very helpful				Of little or no help
5	4	3	2	1

7. How helpful have EBCE experiences been in helping students understand the democratic process?

Very helpful				Of little or no help
5	4	3	2	1

8. How helpful have EBCE experiences been in helping students learn how society's values, the government and the economy affect the world of work?

Very helpful				Of little or no help
5	4	3	2	1

9. How helpful have EBCE experiences been in helping students learn how their interests and abilities fit into potential careers?

Very helpful				Of little or no help
5	4	3	2	1

10. How helpful have EBCE experiences been in helping students learn how to find and keep a job?

Very helpful				Of little or no help
5	4	3	2	1

11. How helpful have EBCE experiences been in helping students learn to analyze potential jobs?

Very helpful				Of little or no help
5	4	3	2	1

12. How helpful have EBCE experiences been in helping students improve their reading skills?

Very helpful				Of little or no help
5	4	3	2	1

13. How helpful have EBCE experiences been in helping students learn the basic skills necessary for the careers that interest them?

Very helpful				Of little or no help
5	4	3	2	1

14. How helpful have EBCE experiences been in helping students improve their oral communication skills?

Very helpful				Of little or no help
5	4	3	2	1

15. How helpful have EBCE experiences been in helping students improve their mathematics skills?

Very helpful				Of little or no help
5	4	3	2	1

16. How helpful have EBCE experiences been in helping students know what level of basic skills proficiency is required in the jobs of interest to them?

Very helpful				Of little or no help
5	4	3	2	1

17. How helpful have EBCE experiences been in helping students improve their written communication skills?

Very helpful				Of little or no help
5	4	3	2	1

18. How helpful have EBCE experiences been in helping students become acquainted with a broad range of resources to use in gathering information for work and decision making?

Very helpful				Of little or no help
5	4	3	2	1

19. How helpful have EBCE experiences been in helping students gain confidence in their ability to apply basic skills to complete tasks and solve problems around them?

Very helpful				Of little or no help
5	4	3	2	1

20. How helpful have EBCE experiences been in helping students take responsibility for their own actions?

Very helpful				Of little or no help
5	4	3	2	1

21. How helpful have EBCE experiences been in helping students communicate comfortably with adults?

Very helpful				Of little or no help
5	4	3	2	1

22. How helpful have EBCE experiences been in helping students use information obtained through direct experiences in making decisions?

Very helpful				Of little or no help
5	4	3	2	1

23. How helpful have EBCE experiences been in helping students become more open to ideas and values different from their own?

Very helpful				Of little or no help
5	4	3	2	1

24. How helpful have EBCE experiences been in helping students feel prepared to accept adult responsibilities?

Very helpful				Of little or no help
5	4	3	2	1

25. What factors, if any, have you seen this year that are contributing in a major way to the success of the EBCE program?

26. What obstacles, if any, have you seen this year that are limiting the success of the EBCE program?

27. In what areas do you feel EBCE students have made the greatest growth this year? Why?

28. In what areas do you feel EBCE students have made the least growth this year? Why?

29. What effects, if any, do you feel the EBCE program has had on the regular high school program? Why?

30. What effects, if any, do you feel the EBCE program has had on the community? Why?

31. What changes, if any, would you suggest in the EBCE program for next year?

Appendix J

ANOVA and ANCOVA Tables

Comprehensive Tests of Basic Skills (CTBS)

Reading Comprehension					
		Pretest			
Source	SS	df	MS	F	p
TRT	343.5	1	343.5	3.82	-
Error	6567.2	73	90.0		
Total	6910.7	74			
		Posttest			
TRT	108.2	1	108.2	0.92	-
Error	8563.6	73	117.3		
Total	8671.8	74			
Mathematics Concepts					
		Pretest			
TRT	161.4	1	161.4	4.89	<.05
Error	2410.5	73	33.0		
Total	2571.9	74			
		Posttest			
TRT	188.4	1	188.4	6.43	<.025
Error	2139.0	73	29.3		
Total	2327.4	74			
		ANCOVA			
Total	915.9	73			
Error	896.1	72	12.4		
TRT	19.8	1	19.8	1.60	-
					b = 0.72

CTBS (cont'd)

Mathematics Applications		Pretest			
Source	SS	df	MS	F	p
TRT	196.4	1	196.4	5.25	<.05
Error	2726.9	73	37.4		
Total	2923.3	74			
		Posttest			
TRT	382.0	1	382.0	9.77	<.005
Error	2852.2	73	39.1		
Total	3234.2	74			
		ANCOVA			
Total	1684.8	73			
Error	1591.4	72	22.1		
TRT	93.4	1	93.4	4.23	<.05
				b = 0.70	

Student Attitude Survey (SAS) - Part 1

Education - General					
		Pretest			
Source	SS	df	MS	F	p
TRT	15.6	1	15.6	0.69	-
Error	1643.0	73	22.5		
Total	1658.6	74			
		Posttest			
TRT	18.1	1	18.1	0.86	-
Error	1539.9	73	21.1		
Total	1553.0	74			
School Curriculum		Pretest			
TRT	9.2	1	9.2	1.03	-
Error	651.5	73	8.9		
Total	660.7	74			
		Posttest			
TRT	4.1	1	4.1	0.52	-
Error	573.2	73	7.9		
Total	577.3	74			
School Resources		Pretest			
TRT	34.1	1	34.1	1.33	-
Error	1866.1	73	25.6		
Total	1900.2	74			
		Posttest			
TRT	21.7	1	21.7	0.73	-
Error	2159.3	73	29.6		
Total	2181.0	74			

SAS - Part 1 (cont'd)

School Counseling					
		Pretest			
Source	SS	df	MS	F	p
TRT	0.1	1	0.1	0.01	-
Error	1104.6	73	15.1		
Total	1104.7	74			
		Posttest			
TRT	15.7	1	15.7	0.95	-
Error	1211.8	73	16.6		
Total	1227.5	74			
Total Learning Environment					
		Pretest			
TRT	169.7	1	169.7	0.96	-
Error	12848.3	73	176.0		
Total	13018.0	74			
		Posttest			
TRT	221.5	1	221.5	1.10	-
Error	14650.4	73	200.7		
Total	14871.9	74			

Student Attitude Survey (SAS) - Part 2

Career Knowledge					
		Pretest			
Source	SS	df	MS	F	p
TRT	7.1	1	7.1	0.14	-
Error	3777.6	73	51.7		
Total	3784.7	74			
		Posttest			
TRT	124.4	1	124.4	3.80	-
Error	2385.4	73	32.7		
Total	2509.8	74			
Career Planning					
		Pretest			
TRT	93.8	1	93.8	2.83	-
Error	2421.3	73	33.2		
Total	2515.1	74			
		Posttest			
TRT	44.0	1	44.0	1.84	-
Error	1743.8	73	23.9		
Total	1787.8	74			
Work					
		Pretest			
TRT	152.6	1	152.6	1.13	-
Error	9898.3	73	135.6		
Total	10050.9	74			
		Posttest			
TRT	316.2	1	316.2	3.43	-
Error	6729.8	73	92.2		
Total	7046.0	74			

Student Attitude Survey (SAS) - Parts 3 and 4

Part 3 - Self			Pretest		
Source	SS	df	MS	F	p
TRT	45.7	1	45.7	0.42	-
Error	7975.0	73	109.2		
Total	8020.7	74			
			Posttest		
TRT	38.3	1	38.3	0.28	-
Error	9929.2	73	136.0		
Total	9967.5	74			
Part 4 - Others			Pretest		
TRT	1.5	1	1.5	0.02	-
Error	6063.5	73	83.1		
Total	6065.0	74			
			Posttest		
TRT	57.5	1	57.5	1.00	-
Error	4195.5	73	57.5		
Total	4253.0	74			

ANS-IE

Locus of Control					
		Pretest			
Source	SS	df	MS	F	p
TRT	79.6	1	79.6	3.75	-
Error	1507.2	71	21.2		
Total	1586.8	72			
		Posttest			
TRT	251.4	1	251.4	10.52	<.005
Error	1699.1	71	29.3		
Total	1950.5	72			

Career Maturity Inventory (CMI)

Career Maturity					
		Pretest			
Source	SS	df	MS	F	p
TRT	2.8	1	2.8	0.08	-
Error	3003.4	72	41.7		
Total	3006.2	73			
		Posttest			
TRT	36.3	1	36.3	1.05	-
Error	2487.9	72	34.6		
Total	2524.2	73			

JOBS

Total Sex-role Stereotyping					
		Pretest			
Source	SS	df	MS	F	p
TRT	16.4	1	16.4	0.44	-
Error	2761.3	74	37.3		
Total	2777.7	75			
		Posttest			
TRT	0.1	1	0.1	0.00	-
Error	4039.1	74	54.6		
Total	4039.2	75			